



Reference: AF12/377 SM

26 May 2015

## MEMBERS

**NOTICE** is hereby given that the Environmental Sustainability Sub-Committee will meet in the following Meeting Room on the day, date and time as follows:

**Environmental Sustainability Sub-Committee**  
(Conference Room - Level 1):

Tuesday, 2<sup>nd</sup> June 2015 at 7:30 a.m.

An agenda for the meeting is enclosed herewith.

**Grant HUMPHRIES**  
ACTING CHIEF EXECUTIVE OFFICER

ENVIRONMENTAL SUSTAINABILITY SUB-COMMITTEE  
Meeting to be held on Tuesday, 2<sup>nd</sup> June 2015 at 7.30 a.m.

AGENDA

1. GOVERNANCE - Committees - Environmental Sustainability Sub-Committee - Terms of Reference - Ref. AF14/283
2. ENVIRONMENTAL MANAGEMENT - Programme Management - Environmental Waste Management and Education Program - Bin Tagging - Ref. AF11/408 - Bin Tagging
3. ENVIRONMENTAL MANAGEMENT - Project Management - Assessment of Viability for Solar Power on Other Council Sites - PV Assessment - Ref. AF14/95
4. PROPERTY MANAGEMENT - Mount Gambier Aquatic Centre - Aquatic Centre Energy Audit - Ref. AF11/1532
5. ENVIRONMENTAL MANAGEMENT - Caroline Landfill - Incoming Waste Audit - Ref. AF11/371
6. ENVIRONMENTAL MANAGEMENT - Programme Management - Fruit and Nut Trees - Ref. AF14/96
7. ECONOMIC DEVELOPMENT - Project Management - City Development Framework Project - Reminder of Natural Step Session and Water Sustainability Discussion - Ref. AF13/125
8. ENVIRONMENTAL MANAGEMENT - Environmental Sustainability Sub-Committee - Reports for Information - Ref. AF12/377

## ENVIRONMENTAL SUSTAINABILITY SUB-COMMITTEE

Meeting to be held in the Conference Room, Operational Services Area, Level One of Civic Centre,  
10 Watson Terrace, Mount Gambier, on Tuesday 2<sup>nd</sup> June 2015 at 7:30 a.m.

### AGENDA

PRESENT: Cr P Richardson (Presiding Member)  
Crs Von Stanke, D Mutton and S Mezinec

COUNCIL OFFICERS: Daryl Sexton, Director - Operational Services  
Aaron Izzard, Environmental Sustainability Officer  
Sarah Moretti, Administration Officer - Operational Services

APOLOGIES: moved the apology received from be  
accepted.  
seconded

COUNCIL MEMBERS  
AS OBSERVERS:

**WE ACKNOWLEDGE THE BOANDIK PEOPLES AS THE TRADITIONAL CUSTODIANS OF THE LAND WHERE WE MEET TODAY. WE RESPECT THEIR SPIRITUAL RELATIONSHIP WITH THE LAND AND RECOGNISE THE DEEP FEELINGS OF ATTACHMENT OUR INDIGENOUS PEOPLES HAVE WITH THIS LAND.**

MINUTES: moved that the minutes of the previous meeting held on  
Tuesday, 7<sup>th</sup> April 2015 be taken as read and confirmed.  
seconded

QUESTIONS: (a) With Notice - nil submitted.  
(b) Without Notice -

**1. GOVERNANCE - Committees - Environmental Sustainability Sub-Committee - Terms of Reference - Ref. AF14/283**

*Goal: Governance*  
*Strategic Objective: (i) Establish measures for Council's performance and continually compare against community expectations*  
*(ii) Engage with national, state, regional and local forums and partnerships to provide solutions and options to continually improve Councils service delivery and performance*

The Environmental Sustainability Officer reported:

(a) At the Council meeting held on 27<sup>th</sup> January 2015 Council resolved:

*"Council or the relevant standing committee will review the Terms of Reference of all Committees and Sub-Committees by 31st August, 2015 to provide for the opportunity to alter or amend Terms of Reference to Reflect Council's aims and objectives. This review does not preclude the winding up of any Committee or Sub-Committee."*

(b) as such, the Environmental Sustainability Sub-Committee (ESSC) Terms of Reference (TOR) will be reviewed by Council and/or the Operational Services Committee before the above date. To assist the work of the Operational Services Committee and Council, it is

Environmental Sustainability Sub-Committee Agenda for 2<sup>nd</sup> June 2015 Cont'd...

recommended that the members of the ESSC review the TOR and make any subsequent recommendations. The ESSC TOR are attached to this agenda;

- (c) it is recommended that item 5.1 be amended to remove the words “and Community Members”. Membership of the ESSC, and its previous status as the Environmental Sustainability Working Party, has always consisted exclusively of Elected Members. It is seen as appropriate that only Members elected by the community have voting rights to direct the work of the ESSC. This does not preclude community members being consulted on an as needs basis on specific environmental issues.

moved it be recommended:

- (a) The report be received;
- (b) item 5.1 of the Environmental Sustainability Sub-Committee Terms of Reference be amended to remove the words “and Community Members”.

seconded

**2. ENVIRONMENTAL MANAGEMENT - Programme Management - Environmental Waste Management and Education Program - Bin Tagging - Ref. AF11/408 - Bin Tagging**

*Goal: Environment*

*Strategic Objective: (i) Systematically build Council as an environmentally sustainable organisation.*  
*(ii) Use every opportunity to increase the level of community understanding and awareness of the necessity of environmental sustainability.*

The Environmental Sustainability Officer reported:

- (a) This program is part of Council’s waste education strategy, and involves checking the contents of waste and recycling bins from 150 properties via lifting the lid and looking at the contents, and giving specific feedback about what goes in which bins;
- (b) the program is now complete. A summary of the major results is listed below:
- The number of contaminated recycling bins reduced by 41%.
  - The number of contaminated waste bins reduced by 47%.
  - Contamination levels within recycling bins dropped by 19%.
  - Incidents of lids being left on bottles and containers reduced by 38%.

The full report regarding the program provided by SELGA is attached to this agenda.

Given these encouraging results, this program could be used over time to reduce contamination across the town.

moved it be recommended:

- (a) The report be received;
- (b) Council staff continue the bin tagging program throughout the city. The frequency of tagging being determined by staff workloads.

seconded



Environmental Sustainability Sub-Committee Agenda for 2<sup>nd</sup> June 2015 Cont'd...

**3. ENVIRONMENTAL MANAGEMENT - Project Management - Assessment of Viability for Solar Power on Other Council Sites - PV Assessment - Ref. AF14/95**

*Goal: Environment*

*Strategic Objective: (i) Systematically build Council as an environmentally sustainable organisation*

The Environmental Sustainability Officer reported:

(a) At the Council meeting held on 17<sup>th</sup> March 2015 Council resolved:

*“Council commission Quark Consulting to undertake an assessment of Council’s other major facilities for their suitability for solar power.”;*

(b) the assessment for solar potential for numerous of Council’s other sites is now complete. Quark will present the major findings of their assessment, with subsequent recommendations;

(c) the sites assessed were as follows:

- Civic Centre
- Aquatic Centre
- Depot
- Carinya Gardens
- Waste Transfer Centre

moved it be recommended:

(a) The report be received.

seconded

**4. PROPERTY MANAGEMENT - Mount Gambier Aquatic Centre - Aquatic Centre Energy Audit - Ref. AF11/1532**

*Goal: Building Communities*

*Strategic Objective: (i) Strive for an increase in services and facilities to ensure the community has equitable access and that the identified needs of the community are met.*

The Environmental Sustainability Officer reported:

(a) The Mount Gambier Aquatic Centre is a significant community facility which uses a large amount of electricity during the pool season. Staff connections with Zero Waste SA have resulted in Zero Waste funding a \$5,000 electricity audit of the facility;

(b) the audit is now complete and identified numerous possibilities that may lead to long term reductions in electricity costs. These proposed actions are now being considered by Aquatic Centre management. The audit report is attached to this agenda.

moved it be recommended:

(a) The report be received.

seconded

**5. ENVIRONMENTAL MANAGEMENT - Caroline Landfill - Incoming Waste Audit - Ref. AF11/371**

*Goal: Diversity*

*Strategic Objective: (i) Develop the capacity of Council to effectively communicate and engage with our communities, other agencies and service providers*

*Goal: Environment*

*Strategic Objective: (i) Systematically build Council as an environmentally sustainable organisation*

*(ii) Use every opportunity to increase the level of community understanding and awareness of the necessity of environmental sustainability*

The Environmental Sustainability Officer reported:

- (a) Anecdotally there is a significant amount of material being taken to Caroline Landfill that could otherwise be recycled or composted. Some of this is of domestic kerbside origin, but there is also significant contamination coming from commercial loads. In order to understand the volumes of this material, and where it is coming from, an audit was undertaken at the landfill from 13-17 April 2015;
- (b) during this period a contractor was based at Caroline Landfill and assessed every load of material being deposited. Each load was assessed to estimate proportions of various kinds of waste – especially the proportion of recyclable and organic material present. An estimate in line with NGRS reporting criteria was also made for each load (e.g. percentages of Municipal Solid Waste, Construction & Demolition etc) – as recommended by the 2014 Blue Environment report;
- (c) of the 79 loads of waste that were taken to the landfill during that period, 38% contained more than 10% contamination – either recyclables and/or organic material. Major contaminants were recyclable plastics, woody/garden organics, cardboard and paper.

A large proportion of this material is organic, and has the potential to create leachate and methane – both pose risks to the environment. This material also uses up landfill space unnecessarily, and is a waste of resources – the material could be recycled or composted.

Of the total volume of waste deposited to the landfill during that period 23% should not be going to landfill. This material should be recycled or composted;

- (d) one of the limitations of the audit was the presence of bagged waste, which accounted for 55% of the total volume of material taken to the landfill. It was not feasible to open every bag of waste and assess the contents during this audit. In order to get an estimate of what is contained in the bagged waste, the figures from the 2012 bin audit can be used. This audit involved opening the contents of 100 waste bins and sorting their contents. The 2012 audit found that 61% of the contents of Mount Gambier's waste bins is either recyclables or organics. Using these figures as a guide, then a total of 56% of the material taken to Caroline should not be going to landfill – it should be recycled or composted instead;
- (e) Council staff will now use this information to work with contractors and their clients to reduce contamination at the landfill. In addition, Council's ongoing community education activities will be continued.

moved it be recommended:

Environmental Sustainability Sub-Committee Agenda for 2<sup>nd</sup> June 2015 Cont'd...

- (a) The report be received.

seconded

**6. ENVIRONMENTAL MANAGEMENT - Programme Management - Fruit and Nut Trees - Ref. AF14/96**

*Goal: Environment*

*Strategic Objective: (i) Systematically build Council as an environmentally sustainable organisation*  
*(ii) Use every opportunity to increase the level of community understanding and awareness of the necessity of environmental sustainability*

The Environmental Sustainability Officer reported:

- (a) At the Council meeting held on 17<sup>th</sup> March 2015 it was resolved to release a competitive Expression of Interest (EOI) to the community for the planting of \$500 worth of edible plants in a Council reserve;
- (b) one strong submission was received, from the residents in the vicinity of the Limestone Court reserve;
- (c) the residents from Limestone Court have requested the following plants:
- Lemon x 1
  - Orange x 1
  - Mandarin x 1
  - Pear x 1
  - Walnut x 1
  - Avocado x 1;
- (d) relevant Council Officers have advised that there are no apparent issues with planting the above-mentioned plants in these reserves. No trees will be planted within 10 metres of houses, power lines, or water pipes – nor will they be planted so they will overhang roads or footpaths;
- (e) following the receiving of the submission, a subsequent letter was sent to residents who live in Limestone Court and Lorraine Street. The purpose of this letter was to inform those residents of the plans to put fruit trees in their local reserve, and provide them an opportunity to give feedback. Four residents responded, all supporting the proposed plantings;
- (f) there are sufficient funds in the Sustainability budget to cover the purchase of plants for Limestone Court;
- (g) Council staff are liaising with the residents who supported the submission, to organise the planting of the plants listed in the above report. Council will be advised when the date is set.

moved it be recommended:

- (a) The report be received.

seconded

Environmental Sustainability Sub-Committee Agenda for 2<sup>nd</sup> June 2015 Cont'd...

**7. ECONOMIC DEVELOPMENT - Project Management - City Development Framework Project - Reminder of Natural Step Session and Water Sustainability Discussion - Ref. AF13/125**

Goal: *Building Communities*

Strategic Objective: (i) *Strive for an increase in services and facilities to ensure the community has equitable access and that the identified needs of the community are met.*

The Environmental Sustainability Officer reported:

(a) At the Council meeting held on 21<sup>st</sup> April 2015 Council resolved:

*“Council invite Dr Steb Fisher to a half day workshop for all Council Members and appropriate staff to revisit the Natural Step Framework and provide a general overview of the framework to Council Members and staff.*

*Council convene an informal discussion with South East Natural Resources Management Board on the issue of water sustainability and community interaction (e.g. relationship of water sustainability to population growth).”;*

(b) These sessions for Members and relevant staff will both be held on the 30<sup>th</sup> of June 2015.

The proposed schedule is as follows:

12:30pm	Light lunch
1pm-4pm	Natural Step with Steb Fisher
5-6pm	Water Sustainability Discussion with SENRMB.

moved it be recommended:

(a) The report be received.

seconded

**8. ENVIRONMENTAL MANAGEMENT - Environmental Sustainability Sub-Committee - Reports for Information - Ref. AF12/377**

The Environmental Sustainability Officer reported:

(a) Environmental Sustainability Program 2015 - Project Progress

The current table outlining projects for 2015 is attached to the agenda for Members information.

moved it be recommended:

(a) The report be received;

(b) item (a) as above be received and noted for information.

seconded

**MOTIONS WITHOUT NOTICE**

The meeting closed at      a.m.



## **Environmental Sustainability Sub-Committee**

### **TERMS OF REFERENCE**

A Sub-Committee of Council Established  
pursuant to the provisions of Section 41  
of the Local Government Act 1999.

Terms of Reference for the conduct of the business of the Council Sub-Committee were approved and adopted by the City of Mount Gambier at its meeting held on 18<sup>th</sup> September, 2012.

## **Environmental Sustainability Sub-Committee**

The Environmental Sustainability Sub-Committee has been established to:

- Assist Council achieve its environmental sustainability goals and objectives.
- Provide advice to Council, staff and community on sustainability including assistance with assessment of projects and initiatives against Council's adopted environmental sustainability framework.
- Monitor achievements in environmental sustainability against the adopted Strategic Plan, annual business plan and budget.
- Promote environmental sustainability to the organisation and community.
- Develop programs and activities that fit the adopted environmental sustainability framework and submit to the Operational Services Committee for its consideration.

# Environmental Sustainability Sub-Committee

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## 1. NAME

The name of the Council Sub-Committee shall be the Environmental Sustainability Sub-Committee (in these Terms of Reference referred to as “the Sub-Committee”).

## 2. INTERPRETATION

For the purpose of these Terms of Reference, unless inconsistent with the subject matter or context: -

### 2.1 Definition

- 2.1.1 “Act” means the Local Government Act 1999 and includes all Regulations and Schedules.
- 2.1.2 “Sub-Committee” means the Sub-Committee of Council established pursuant to 3.0.
- 2.1.3 “Sub-Committee Member” means the person appointed by the Standing Committee.
- 2.1.4 “Commencement Date” means the date on which the Sub-Committee is established and becomes operative pursuant to 3.2.
- 2.1.5 “Council” means the City of Mount Gambier.
- 2.1.6 “Presiding Member of the Sub-Committee of Council” means the person appointed to that position pursuant to 5.3.
- 2.1.7 “Observers” means those persons attending any meeting of the Sub-Committee of Council, but not having a vote on any matter to be determined by the Sub-Committee and not having been appointed as Members.
- 2.1.8 “Singular” includes a reference to the “plural”.
- 2.1.9 Standing Committee means the Committee that established the Sub-Committee and to which the Sub-Committee reports.

### 2.2 Defined Terms

Any words, phrases or terms used in these Terms of Reference that are defined in the Act shall have the same meaning as are given in the Act.

### 2.3 Local Government Act

These Terms of Reference shall be interpreted in line with the provisions of the Act.



## 2.4 Notices

All communication to be given to the Sub-Committee shall be addressed to: -

Environmental Sustainability Sub-Committee  
PO Box 56  
MOUNT GAMBIER SA 5290  
Email: [city@mountgambier.sa.gov.au](mailto:city@mountgambier.sa.gov.au)

## 3. ESTABLISHMENT

- 3.1 The Sub-Committee is established under Section 41 of the Local Government Act 1999.
- 3.2 The Sub-Committee will be established and become operative from the time a resolution of the Standing Committee is passed.
- 3.3 The Sub-Committee is established by the Standing Committee to assist in the co-ordination and administration of advising on and implementation of Council's Environmental Sustainability program.

## 4. OBJECTIVES

- 4.1 The Sub-Committee is created for the express purpose of assisting the Standing Committee to develop and implement a range of environmental sustainability initiatives and programs (LGAct S41(7)).

## 5. MEMBERSHIP

- 5.1 Membership of the Sub-Committee will comprise Elected Members and Community Members. The Mayor has Ex-Officio membership on this Sub-Committee.
- 5.2 The Standing Committee reserves the right from time to time to remove any Member of the Sub-Committee and appoint another Member in their stead. All Members hold office at the pleasure of the Standing Committee.
- 5.3 The Sub-Committee will appoint a Presiding Member.

## 6 CASUAL VACANCIES AND REPLACEMENT REPRESENTATIVES

- 6.1 The Standing Committee may replace any Member on the Sub-Committee or fill any casual vacancies, by notifying the Sub-Committee the identity of the person proposed to replace the representative or fill the casual vacancy.

## **7 NO PROXY**

- 7.1 The appointment of a person as proxy for any Member on the Sub-Committee is not permissible.

## **8 RESIGNATION OF REPRESENTATIVES**

- 8.1 Any Sub-Committee Member may resign from the Sub-Committee, but such resignation shall not be effective until the Presiding Member has received written notice to that effect.

## **9 QUORUM**

- 9.1 At all Meetings of the Sub-Committee a quorum must be present.
- 9.2 A quorum will be determined by dividing by 2 the number of Members formally appointed to the Sub-Committee ignoring any fraction and adding 1 (excluding Mayor as ex-officio).

## **10 MEETINGS OF THE SUB-COMMITTEE**

- 10.1 The Sub-Committee shall meet as and when determined by the Presiding Member.
- 10.2 The CEO or his appointee shall give notice to each Sub-Committee Member at least five clear days prior to any meeting.
- 10.3 The CEO or his appointee shall send a copy of the notice of a meeting and minutes of the Sub-Committee to the Standing Committee.
- 10.4 The CEO or his appointee must, at the request of the Presiding Member or three other Members, call a special meeting of the Sub-Committee.
- 10.5 All notices of meetings shall be issued under the hand of the CEO or his appointee.
- 10.6 No business shall be transacted at any meeting of the Sub-Committee unless a quorum of Members is present.
- 10.7 Each Member of the Sub-Committee including the Presiding Member present at any meeting of the Sub-Committee must vote on any matter requiring determination and all decisions shall be decided on a simple majority of votes cast.
- 10.8 Each Member of the Sub-Committee including the Presiding Member present at any meeting of the Sub-Committee shall have one deliberate vote only.

## 11 PROCEDURES AT MEETINGS

The procedure to be observed in relation to the conduct of meetings of the Sub-Committee is in accordance with Local Government (Procedures at Meetings) Regulations 2000.

## 12 LIABILITY OF THE SUB-COMMITTEE

12.1 A liability incurred by the Sub-Committee rests against Council.

12.2 No liability attaches to a Member of the Sub-Committee for an honest act or omission by that Member of the Sub-Committee in the performance or discharge, or purported performance or discharge, of the Member's or the Sub-Committee's functions or duties.

## 13 MINUTES OF THE SUB-COMMITTEE

### 13.1 Administration

13.1.1 The CEO or his appointee must cause minutes to be kept of the proceedings of the Sub-Committee.

13.1.2 Minutes of the Sub-Committee shall be available to all Members of the Sub-Committee, Standing Committee, Council and the public.

13.1.3 The Minutes of the proceedings of a meeting must include:

13.1.3.1 the names of the Members present and the time at which they entered or left the meeting;

13.1.3.2 the names of observers or visitors to any meetings;

13.1.3.3 every motion or amendment and the names of the mover and seconder;

13.1.3.4 any disclosure of interest declared by a Member;

13.1.3.5 whether the motion or amendment is carried, lost or lapsed;

13.1.3.6 Minutes of the Sub-Committee Meeting shall be distributed within 5 days of the meeting;

13.1.3.7 Minutes of the Sub-Committee Meeting shall be submitted for confirmation at the next meeting of the Sub-Committee and if confirmed, shall be signed by the Presiding Member or other person presiding at the subsequent meeting.

## **14 AMENDMENTS TO THESE TERMS OF REFERENCE**

- 14.1 It will be lawful for the Standing Committee by resolution of the Standing Committee to revoke, vary or add to any of the provisions of these Terms of Reference at its own discretion within the parameters of the Local Government Act and other relevant legislation.
- 14.2 Notwithstanding 14.1 hereof before the Standing Committee resolves to revoke, vary or add to any of the provisions of these Terms of Reference the opinion of the Sub-Committee shall be obtained.

## **15 INTERPRETATION OF THESE TERMS OF REFERENCE**

- 15.1 Should there be any dispute as to the definition and/or interpretation of these Terms of Reference, or any part thereof or any irregularities whatsoever, then the Standing Committee shall determine the dispute and the decision of the Standing Committee shall be final and binding.

## **16 WINDING UP**

- 16.1 The Standing Committee may cease the operation of the Sub-Committee and the Sub-Committee may make such recommendation to the Standing Committee on the completion of its function.

4<sup>th</sup> September 2012  
Ref: AF11/364  
SW

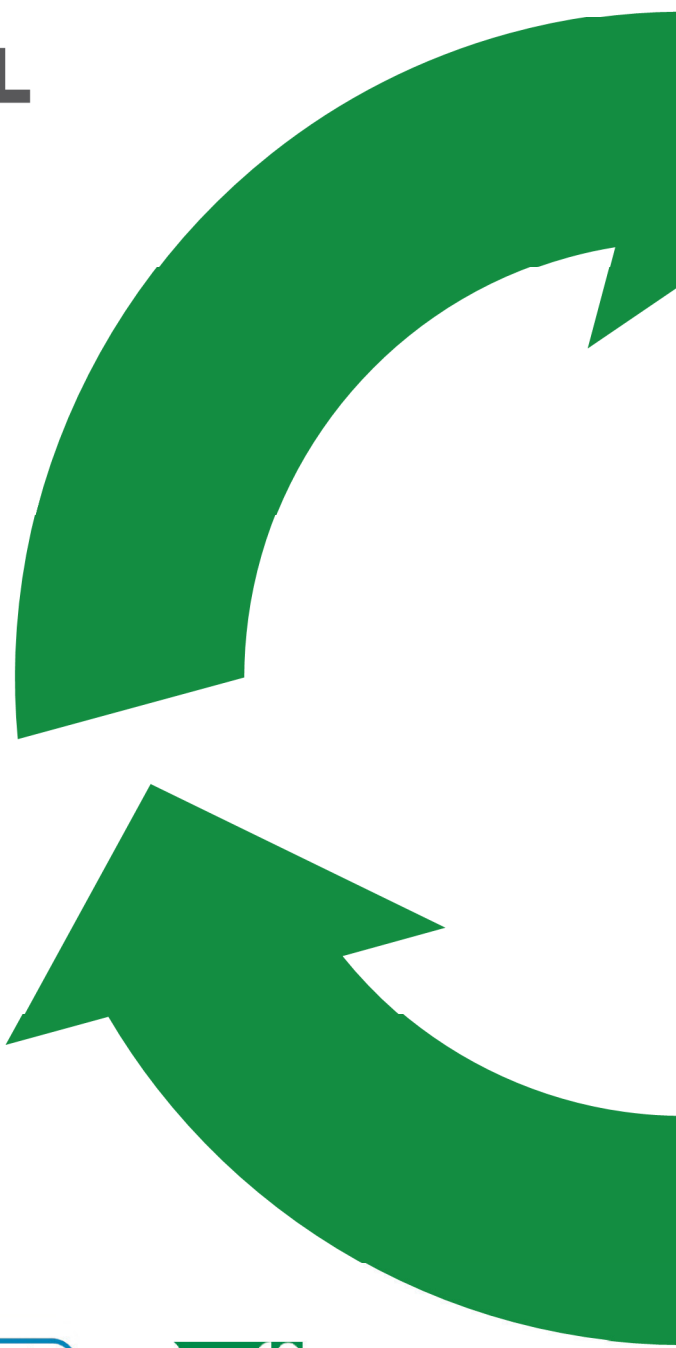
Zero Waste SA

# RECYCLE RIGHT

## **BIN TAGGING TRIAL**

CITY OF MOUNT GAMBIER

2015



Government of South Australia  
Zero Waste SA



**AVOID • REDUCE • REUSE • RECYCLE**

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## EXECUTIVE SUMMARY

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The City of Mount Gambier, with the support of Zero Waste SA and South East Local Government Association, trialled the *Recycle Right*® Bin Tagging program from February to April 2015 with 157 properties.

The trial was successful in reducing both the number of recycling bins presented with contamination and level of contamination in recycling bins with incorrect items, and in reducing the number of waste bins presented with recyclables.

On first inspection the average number of contaminated recycling bins was 62%, which decreased to 36% by the end of the trial: a reduction in contamination of 41% across three collections.

The top five contaminants placed in recycling bins at the beginning of the trial in order of prevalence were containers and bottles with lids on, paper towel or shredded paper, food and organic material, dirty soft plastics, and bagged waste. At the end of the trial, the incidence of lids being left on bottles and containers had reduced by 38%. However, contaminants that still required education in the community included lids left on containers and bottles, recyclables placed in plastic bags, polystyrene and food and organic material.

The level of contamination presented in recycling bins also dropped across the trial by 19%; meaning that recycling bins that still presented contamination, presented a lower level of contamination.

Presentation rates of recycling remained steady across the trial at an average of 73%. Recycling bins were on average 70% full. Participation and capacity rates for recycling bins do not indicate a need for increased/decreased frequency in recycling collections.

On first inspection, the average number of contaminated waste bins, predominantly recyclables and items banned from landfill, was 46%, which decreased to 25% by the end of the trial: a reduction in contamination of 47% across three collections.

The presentation rate of waste bins remained steady across the trial at an average of 80%. Waste bins were on average 65% full. Participation and capacity rates for waste bins do not indicate a need for increased/decreased frequency in waste collections.

This report concludes with four recommendations for improved, ongoing educational activities to assist householders to develop the desired knowledge and behaviours. The recommendations in summary are as follows:

1. Introduce a program of ongoing education using Zero Waste SA branded resources including fact sheets, the A-Z Disposal Guide and presentations to community and school groups.
2. Include incentives as a part of future bin tagging programs to provide greater promotion of the bin tagging program, and encourage wider community improvement in recycling.



3. Increase local media activity through media releases and advertising
4. Recruit households who are recycling right to be ambassadors for the program and to provide other households with tips on how they recycle at home



## INTRODUCTION

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The Regional Waste Management Coordinator, South East Local Government Association (SELGA), the District Council of Robe, Naracoorte Lucindale Council, Tatiara Regional Council and the City of Mount Gambier approached Zero Waste SA (ZWSA) to trial *Recycle Right*'s bin tagging program with regional Councils working as a region to find solutions to low diversion and high contamination in kerbside recycling.

The success of the bin tagging program trialed in Holdfast Bay and Marion councils, where contamination of recycling was decreased by 66% and recycling increased by as much as 43%, indicated that bin tagging could be as successful if trialed in a regional area.

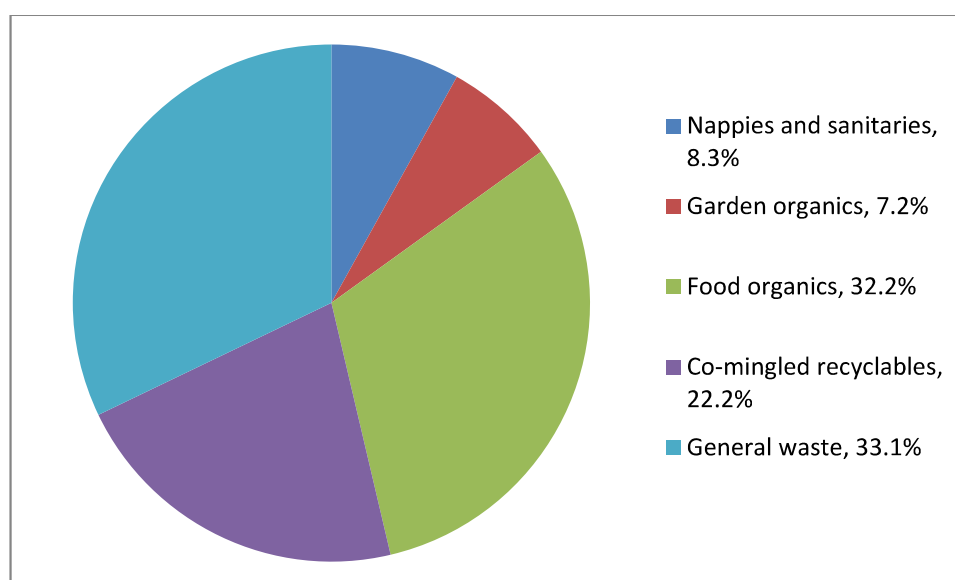
The City of Mount Gambier's kerbside waste collection service provides for:

- putrescible waste 140 litre (red lid) bin collected weekly
- mixed recyclables 240 litre (yellow lid) bin collected fortnightly
- voluntary green organics 240 litre (green lid) bin collected fortnightly.

The new system supports South Australia's Waste Strategy aim to divert 70% of kerbside material away from landfill by 2015. The City of Mount Gambier's current kerbside landfill diversion rate is 45%. The City of Mount Gambier carried out kerbside waste and recycling audits in 2011-2012 with the following results:

### Putrescible Waste

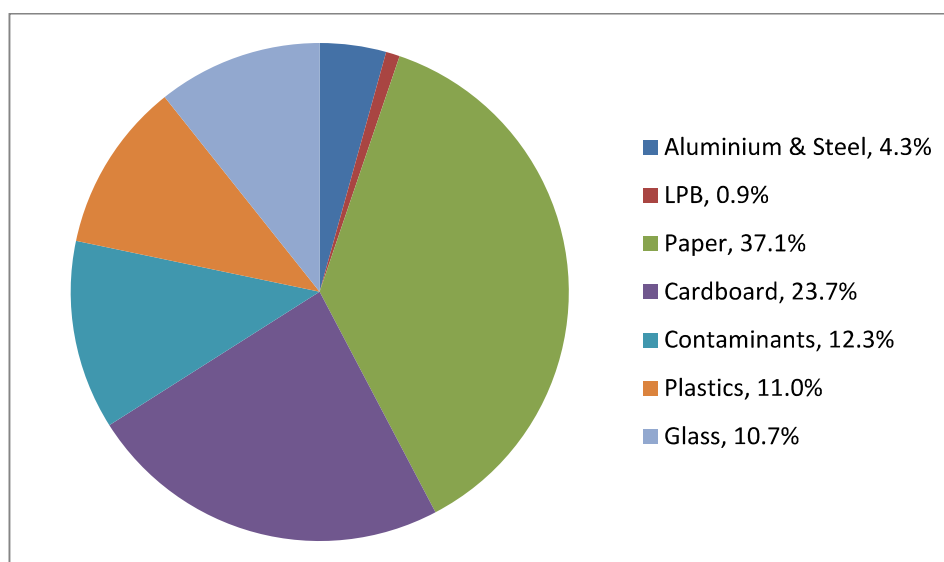
In 2011-2012 Mount Gambier residents sent a total of 5,617 tonnes of putrescible waste to landfill via their general rubbish bins. Over 3,290 tonnes (58.6%) of this could have been prevented through putting all recyclables in the recycling bin, and putting organic waste in the organics bin or home compost.



## Recycling

In 2011-2012 Mount Gambier residents put a total of 2,333 tonnes of material in their recycling bins. However, over 286 tonnes (12.3%) of this was not actually recyclable. This should have gone in the general rubbish bin, organics bin / home compost, or the Waste Transfer Centre.

Common contaminants include: clothes, bottles with lids on, items inside plastic bags, metal pots and cutlery, soft toys, plastics #6, plastics #7, containers with food in them, and nappies.



Financial savings can also be made from increasing diversion. The cost per tonne of waste disposal in the region is currently approximately twice that of recyclables processing (specific costs are commercially confidential). This margin could increase significantly if Council secured more favourable terms for processing recyclable material. The City of Onkaparinga recently negotiated payment for their kerbside recyclables. Hence, the return on investment from programs designed to increase diversion from landfill will be more significant in the future.

As well as providing a possible solution to reducing contamination and increasing diversion, the bin tagging program provided information about the nature and extent of the issue, and a means of demonstrating improvement as a consequence of public education.

In August 2014, ZWSA, SELGA and the participating councils entered into an agreement to trial the bin tagging program initially in the Naracoorte Lucindale Council with 150 households across three collections, with a preceding fortnight of education, targeting recycling and waste bins.

ZWSA agreed to supply educational materials to support the trial including training and adaptation of existing templates under the *Recycle Right®* program such as calendars, banners, flyers and tag templates. Councils and SELGA agreed to provide staff for tagging bins and the education sessions.

## THE BIN TAGGING PROGRAM

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Bin tagging follows a staged process of education and inspections of bins to inform households about kerbside waste and recycling services, and their performance. The aim of the program is to reduce contamination in recycling bins while reducing the number of recyclables going to landfill.

Preferably working in pairs, Council officers visually inspect bins. Inspecting recycling bins allows quick identification of contaminants such as soft plastics, lids on bottles and containers, un-rinsed containers, polystyrene, textiles and plastic bags; inspecting waste bins identifies recyclables or items banned from landfill being placed in waste bins.

Once a household's bins are inspected, the household receives feedback in the form of a tag on the bin. Bin tags either thank households who are 'recycling right' or ask households for 'one small favour' with a tip on removing the most prevalent contaminants in their recycling or waste bins.

The same households are inspected each fortnight to give householders a chance to change their behaviour, positive reinforcement if they do, and to determine changes in levels of contamination during the program.

### History of bin tagging program

The City of Holdfast Bay first began bin tagging in 2011 with traders along Jetty Road Precinct. After just four recycling collections the number of traders recycling correctly increased from 56% to an impressive 86%. By the end of the first trial there was a **60% decrease in the number of bins with contamination** and audits conducted by Visy showed a **62% decrease in the amount of incorrect waste** present.

After a follow-up campaign with traders along Brighton Road, contamination rates dropped from 14.75% in week one to 4.99% by the end of the campaign. Bins containing contamination also dropped from 49% of bins at the start of the trial to 11.4% by the end. **Overall reduction in contaminated bins was 66%**. Contamination was most frequently by soft plastics, which **decreased by 48%** after the recycling bins were tagged in the first inspection. The program was also effective in **increasing recycling by up to 43%**.

In a follow-up survey with households and businesses, 100% of survey respondents believed the campaign had helped them better understand what can and cannot be recycled.

The City of Marion trialled bin tagging in an area of predominantly public housing multi-unit dwellings. The trial reported reduced contamination from 43% to 5%.

## **BIN TAGGING IN THE CITY OF MOUNT GAMBIER**

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### **1. Planning phase**

Before beginning the program, Council identified its scope including:

- I. the area/s involved and number of households to be tagged
- II. the level of engagement (number of return visits to the same households in the same area)
- III. the level of enforcement, both incentives and penalties.

#### **Areas and numbers of households involved**

Discussions with Council staff identified 157 properties in Mount Gambier being a mix of commercial and residential properties, at the end of the recycling route that could be inspected prior to the recycling vehicles entering the area. These included the streets of Sturt Street, Bay Road, Commercial Street East, Lake Terrace, Crouch Street, Heriot Court, Headly Court and Kilsby Place.

#### **Level of engagement**

Staffing resources dictated the level of engagement (number of return visits to the same households in the same area): three collections across six weeks with an introductory education tag in the fortnight before tagging, a total of four visits to each household.

#### **Enforcement and incentives**

Bin tagging has shown that elements that encourage participation (carrots) and that enforce compliance (sticks) should be used. Encouragement could include tags on bins to congratulate, invitation to a waste tour or, more typically, financial incentives such as 'jackpots'.

Metropolitan councils where no enforcement has been employed, have shown less impressive rates of change. Enforcement could include delayed collection until contaminants have been removed or removal of the service in cases of serial contaminators. An understanding that the service could be stopped has a positive impact on participation and compliance.

As this was a trial, the City of Mount Gambier decided not to award incentives or to strictly enforce compliance.

### **2. Education phase**

A range of education materials was created to give households all the information they needed to improve recycling behaviour:

- an introductory education tag (Appendix 1) designed and printed by ZWSA, in consultation with Council and SELGA, to notify households:
  - that their area had been selected for the bin tagging trial
  - why it was occurring
  - how the community could help (what can be recycled and how)
  - incentives and enforcement procedures in place.

- stickers (Appendix 2) designed for recycling bins
- the *Recycle Right@* bin tags adapted for South East Councils (Appendix 3)
- the City of Mount Gambier *Recycle Right@* calendar (Appendix 4)
- the City of Mount Gambier A–Z guide (Appendix 5)
- the City of Mount Gambier *Recycle Right@* pull-up banners adapted for the waste and recycling bins (Appendix 6).
- recycling advertisements (Appendix 7)
- bin tagging program media releases (Appendix 8)
- plastics fact sheet (Appendix 9)

### **3. Active engagement, enforcement and measurement phase**

Officers from the City of Mount Gambier, along with a staff member from SELGA, conducted visual inspections of bins in the targeted area and attached an appropriate tag to each bin. Data on contamination in the bin including type and level was recorded.

#### **Tags**

The *Recycle Right@* bin tag templates were adapted for both recycling and waste bins (Appendix 3). As green organics bins are collected on the alternate fortnight, these were not tagged.

Tags used for recycling:

- *Yellow happy face (THANK YOU)*  
If the recycling bin was free of contamination, a yellow tag was attached thanking the resident for doing the right thing.
- *Grey sad face (We ask one small favour)*  
If the recycling bin contained contaminants, a grey tag was attached to the bin highlighting the contaminant present.
- *Grey sad face (We were not able to collect your bin today)*  
If the recycling bin was grossly contaminated, a grey tag was attached to the bin stating the contaminants that had to be removed before collection could occur and the bin was pulled back from the kerb.

Tags used for waste:

- *Red happy face (THANK YOU)*  
If the waste bin was free of contamination, a red tag was attached thanking the resident for doing the right thing.
- *Grey sad face (We ask one small favour)*  
If the waste bin contained contaminants, a grey tag was attached to the bin highlighting the contaminant present.

### **Enforcement**

The City of Mount Gambier has a Waste Management Refuse Collection Policy (Appendix 10) to set out the details associated with the kerbside putrescible waste, recycling and green waste collections in the City of Mount Gambier area. The policy states:

#### *Section 4 – GENERAL*

*(e) The following constitutes grounds for refusal to make collection of refuse placed out for collection:*

*(i) the MGB contains matter prohibited by this policy;*

*(ii) the contents of the MGB are flyblown;*

*(iii) the MGB was late being placed out for collection, or was not positioned in accordance with this policy;*

*(iv) the MGB was placed out for collection in front of a premises which did not have an occupied building on it;*

*(v) rubbish was jammed or stuck in the MGB;*

*(vi) the MGB was over filled or plastic liners were not enclosed inside the MGB;*

*(vii) the MGB was too heavy;*

*(viii) for organic waste disposal - the MGB did not display the correct colour coded tag on the lid, or the tag was not visible at the time of collection.*

*(f) Where rubbish has not been collected in accordance with this policy, notice shall be left at the premises giving the reason the collection was not made.*

*(g) At the refuse collector's discretion a collection may be made which could have been refused pursuant to this policy. In such cases, a notice shall be left at the premises advising that future collections will not be made unless specified remedial action is taken by the owner/occupier.*

In accordance with this policy, households were notified on the introductory education tag (Appendix 1) that 'bins with too many contaminants may not be collected until contaminants are removed'.



## RESULTS - OVERALL

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Baseline data for the trial was collected on Tuesday 17 February 2015 from 157 households in Mount Gambier. The bin tagging trial achieved an overall improvement to recycling and a reduction in contamination levels, and a reduction of recyclables and banned items from landfill present in waste bins.

During baseline data collection, the introductory education tag was placed on one bin presented per property. The tag included information on how to recycle right, along with information on the bin tagging trial. Although this information must be provided to properties, previous trials have shown this generic information to not have a significant effect on reducing contamination. Data for the City of Mount Gambier was consistent with this finding.

### Reduction in contamination

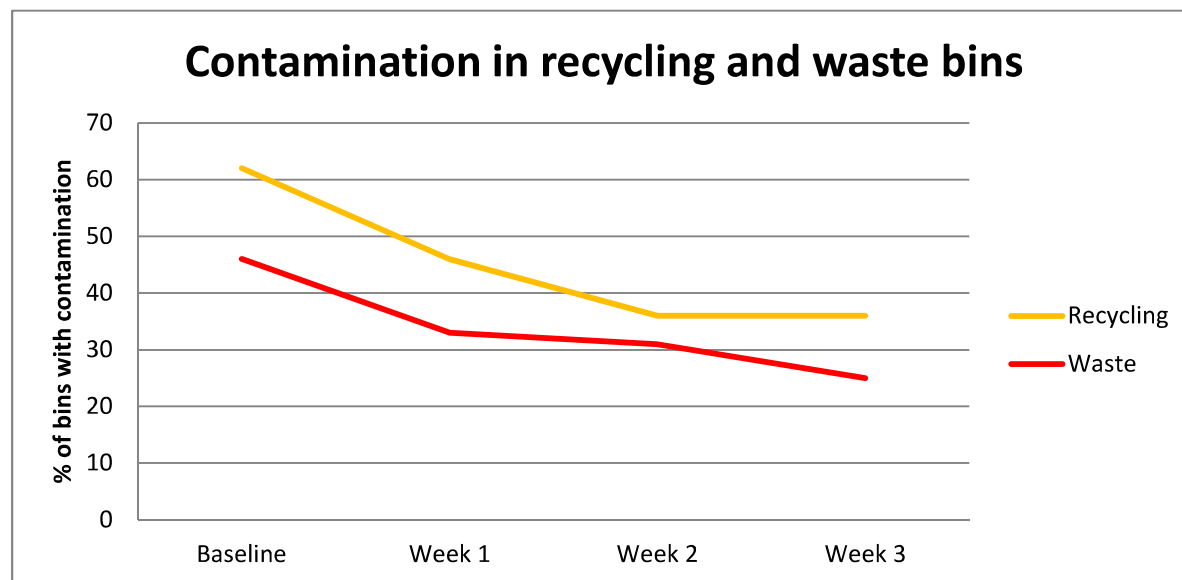
Tags identifying contaminants in recycling bins were first placed on recycling bins on Tuesday 3 March 2015: Week 1. The effect of this information was immediately visible the following week (Week 2) with contamination reducing by 21% (Table 1; Figure 1).

Contamination rates in recycling bins showed a steady decline from 62% of recycling bins having contamination at the start to 36% at the end: **a reduction in contamination of 41%.**

On first inspection, the average number of contaminated waste bins, predominantly recyclables and items banned from landfill, was 46%, which decreased to 25% by the end of the trial: **a reduction in contamination of 47%.**

**Table 1: Percentage of bins with contamination**

Percentage of recycling bins with contamination	Baseline	Week 1	Week 2	Week 3
Recycling	62	46	36	36
Waste	46	33	31	25

**Figure 1: Percentage of bins with contamination****Presentation rates**

Presentation rates of recycling remained steady across the trial at an average of 73%. The presentation rate of waste bins remained steady across the trial at an average of 80%.

Table 2: Presentation rates of recycling and waste bins

Presentation rates	Baseline	Week 1	Week 2	Week 3	Average
Recycling	73	75	70	75	73
Waste	82	78	80	80	80

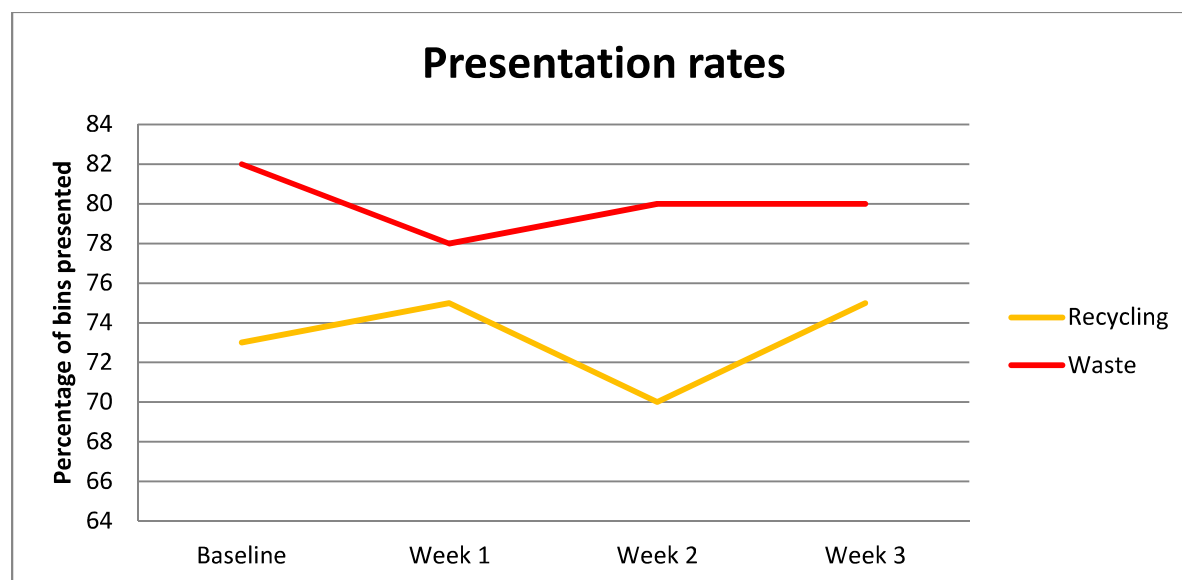


Figure 2: Presentation rates of recycling and waste bins

### Capacity of bins

On inspection the capacity of the bin used (how full the bin was) was estimated.

Recycling bins were on average 70% full. This, along with the presentation rates, for recycling bins does not indicate a need for increased/decreased frequency in recycling collections (Table 3; Figure 3).

Waste bins were on average 65% full. This, along with the presentation rates, for waste bins does not indicate a need for increased/decreased frequency in waste collections (Table 3; Figure 3).

Table 3: Percentage of the capacity of bins used

Percentage of bin 'full'	Baseline	Week 1	Week 2	Week 3	Average
Recycling	71	71	70	67	70
Waste	63	63	68	66	65

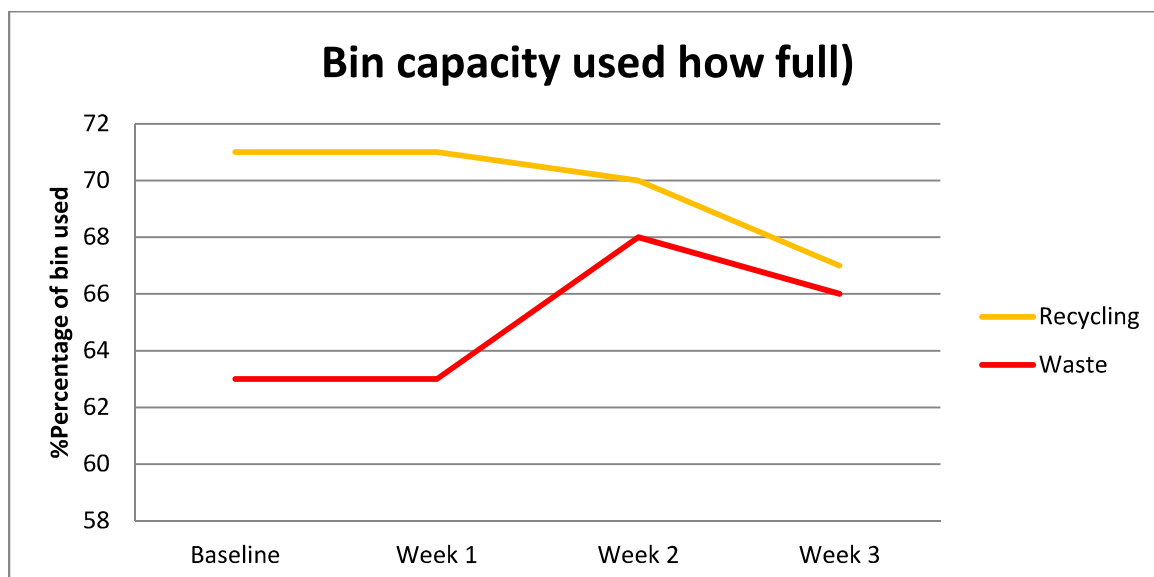


Figure 3: Percentage of bin capacity used

### Contaminants

The top five contaminants placed in recycling bins at the beginning of the trial in order of prevalence were containers and bottles with lids on, paper towel or shredded paper, food and organic material dirty soft plastics, and bagged waste.

At the end of the trial, the incidence of all of these contaminants had reduced significantly (Table 4; Figure 4).

Table 4: Prevalence of contamination types

Number of Recycling Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Dirty soft plastics	9	5	4	4	56%
Lids left on	53	30	23	33	38%
In plastic bags	5	3	6	2	60%
Food/organics	9	7	3	3	67%
Polystyrene	1	6	3	3	-200%
Textiles/clothing	1	3	5	3	-200%
Paper Towel/shredded paper	10	0	4	3	70%
Miscellaneous	0	2	4	3	-300%

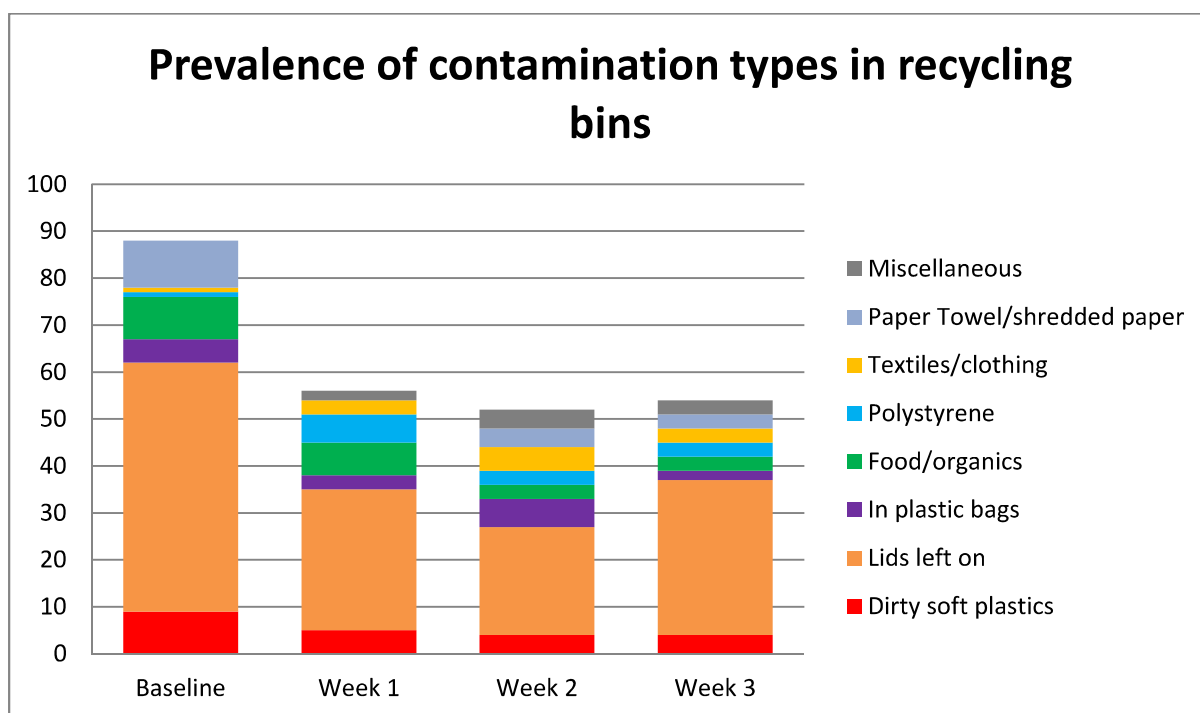


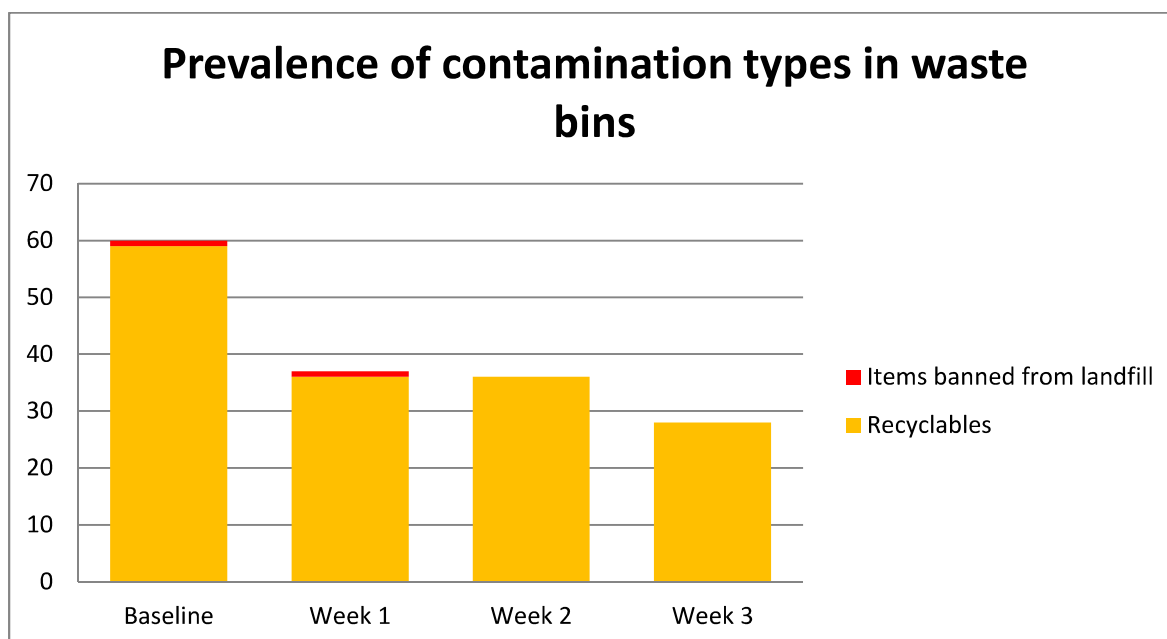
Figure 4: Prevalence of contamination types in recycling bins

Contaminants in the recycling bin that still require further education in the community include lids left on containers and bottles, polystyrene, and textiles and clothing..

The top contaminants placed in waste bins were recyclables, and items banned from landfill. At the end of the trial, the incidence of all contaminants had reduced significantly (Table 5; Figure 5).

**Table 5: Prevalence of contamination types in waste bins**

Number of Waste Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Recyclables	59	36	36	28	53%
Items banned from landfill	1	1	0	0	100%

**Figure 5: Prevalence of contamination types in waste bins****Level of contamination**

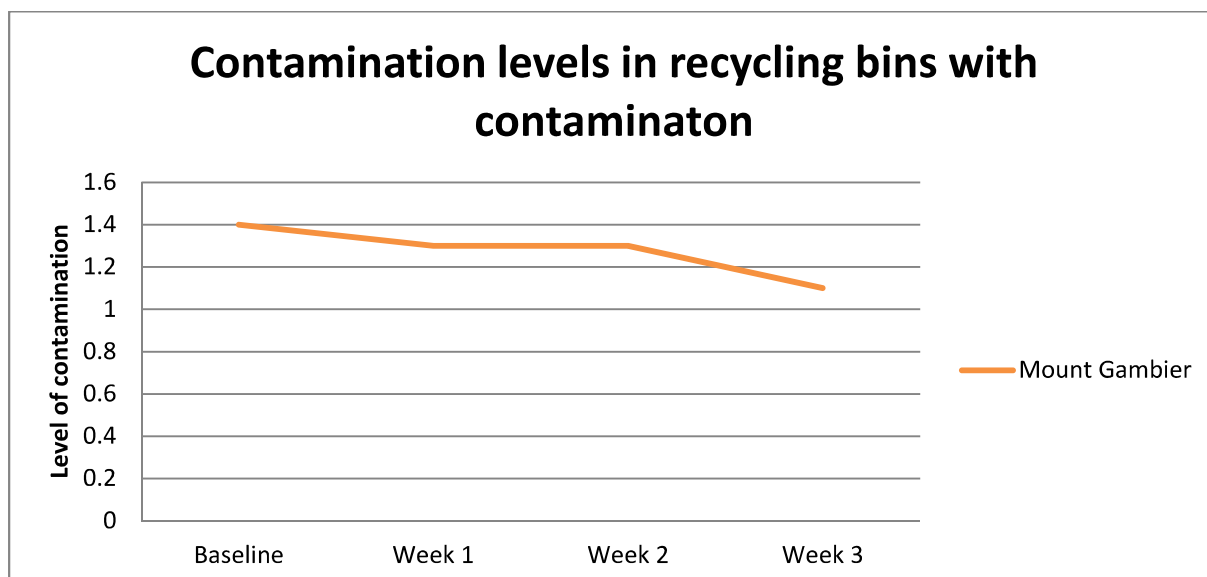
During the collection of data, officers recorded the level of contamination in bins.

- 1 = less than 10% of the contents were a contaminant
- 2 = between 11–30% of the contents were contaminants
- 3 = gross contamination with more than 30% of the contents contaminants.

Across the trial the level of contamination in recycling bins with contamination steadily decreased (Table 6; Figure 6) **by 19%**. However, the averages remained between 1 and 2, thus around 10%.

**Table 6: Average contamination levels in recycling bins with contamination**

Average contamination levels in recycling bins	Baseline	Week 1	Week 2	Week 3
Mount Gambier	1.4	1.3	1.3	1.1



**Table 6: Average contamination levels in recycling bins with contamination**

### Perfect Bins

The number of properties presenting both bins with the correct contents steadily increased across the trial (Table 7). During Week 2 and 3, a number of waste bins had been collected prior to inspections. As a result, the number of properties presenting both bins with the correct contents could not be accurately identified.

It should also be noted that properties that did not present one or more bins were excluded from this data yet may not have had contamination in their bins. They may have simply chosen not to present the bin until it was fuller.

Nevertheless, properties presenting both bins with the correct contents rose from 15% at the start of the trial to 33%: **an increase of 129%**.

**Table 7: Number of properties presenting both bins with the correct contents**

Number of properties presenting both bins with the correct contents	Baseline	Week 1	Week 2	Week 3
Actual number of properties	24	39	46	55
Percentage	15%	25%	29%	35%

This demonstrates that the bin tagging program improved the self-efficacy and confidence of householders to use their bins correctly; however, providing an incentive may increase the effectiveness of converting new knowledge into changed behaviour.

## Enforcement

Properties were notified on the introductory education tag (Appendix 1) that 'bins with too many contaminants may not be collected until contaminants are removed'. Bins would only be tagged that there were not able to be collected if contamination levels at a level 3, that is, contamination was deemed to be greater than 30%.

**Table 8: Percentage of bins with gross contamination**

% of bins with more than 30% levels of contamination	Baseline	Week 1	Week 2	Week 3
Recycling	5 (3.2%)	4 (2.5%)	5 (3.2%)	1 (0.6%)
Waste	7 (4.5%)	2 (1.3%)	1 (0.6%)	0 (0.0%)

Gross contamination did not present as a major issue with only 3% of recycling bins and 5% of waste bins in the baseline data grossly contaminated with contamination levels above 30%. Despite not collecting bins from fewer than 1% of households per week, the number of bins with gross contamination declined significantly across the trial: **80% decrease in presentation of grossly contaminated recycling bins** and **100% decrease in presentation of grossly contaminated waste bins**. It should be noted that the level of contamination in waste bins cannot be accurately identified due to materials being bagged in bin liners.



## RESULTS – COMPARISON BETWEEN COMMERCIAL AND RESIDENTIAL PROPERTIES

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The Bin Tagging trial undertaken in the City of Mount Gambier assessed both commercial and residential properties. Of the 157 properties assessed, 98 were residential properties and 59 were commercial properties. The following provides a breakdown of the different results achieved between the two sectors.

### **Reduction in contamination - Commercial**

Contamination rates in recycling bins showed a steady decline from 54% of recycling bins having contamination at the start to 19% at the end: **a reduction in contamination of 64%.**

On first inspection, the average number of contaminated waste bins, predominantly recyclables and items banned from landfill, was 44%, which decreased to 27% by the end of the trial: **a reduction in contamination of 38%.**

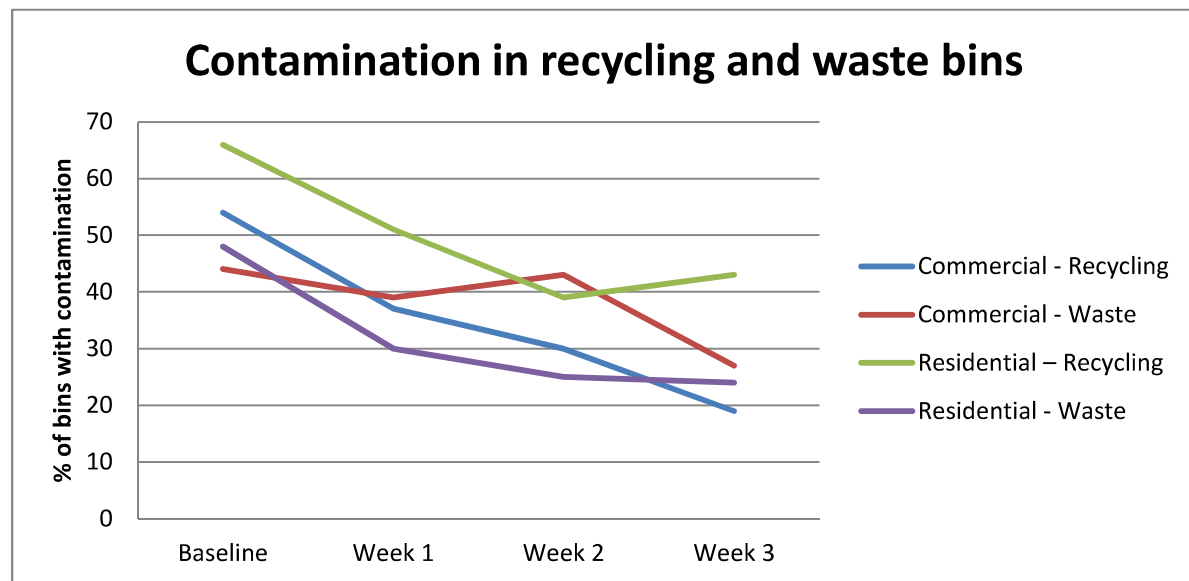
### **Reduction in contamination - Residential**

Contamination rates in recycling bins showed a steady decline from 66% of recycling bins having contamination at the start to 43% at the end: **a reduction in contamination of 34%.**

On first inspection, the average number of contaminated waste bins, predominantly recyclables and items banned from landfill, was 48%, which decreased to 24% by the end of the trial: **a reduction in contamination of 51%.**

**Table 1a: Percentage of bins with contamination – Commercial and Residential**

Percentage of recycling bins with contamination	Baseline	Week 1	Week 2	Week 3
Commercial – Recycling	54	37	30	19
Commercial – Waste	44	39	43	27
Residential – Recycling	66	51	39	43
Residential – Waste	48	30	25	24



**Figure 1a: Percentage of bins with contamination – Commercial and Residential**

**Presentation rates - Commercial**

Presentation rates of recycling remained steady across the trial at an average of 64%. The presentation rate of waste bins remained steady across the trial at an average of 73%.

**Presentation rates - Residential**

Presentation rates of recycling remained steady across the trial at an average of 79%. The presentation rate of waste bins remained steady across the trial at an average of 84%.

Table 2a: Presentation rates of recycling and waste bins – Commercial and Residential

Presentation rates	Baseline	Week 1	Week 2	Week 3	Average
Commercial – Recycling	64	66	63	61	64
Commercial - Waste	69	73	76	75	73
Residential – Recycling	79	80	74	84	79
Residential – Waste	89	81	83	84	84

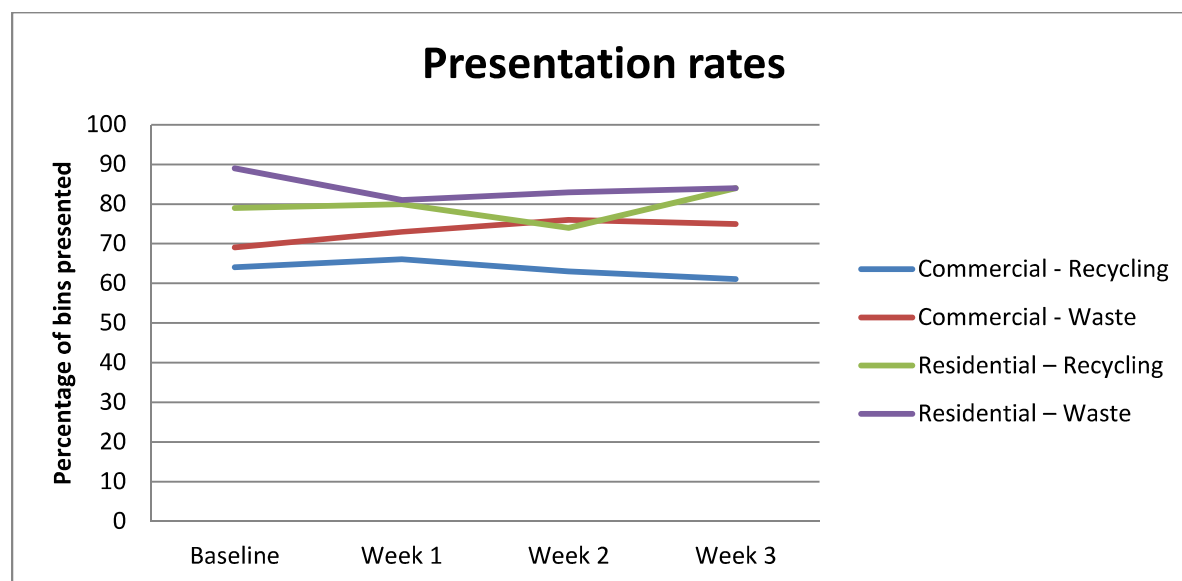


Figure 2a: Presentation rates of recycling and waste bins – Commercial and Residential

### Capacity of bins - Commercial

On inspection the capacity of the bin used (how full the bin was) was estimated.

Recycling bins were on average 75% full. This, along with the presentation rates, for recycling bins does not indicate a need for increased/decreased frequency in recycling collections (Table 3a; Figure 3a).

Waste bins were on average 81% full. This, along with the presentation rates, for waste bins does not indicate a need for increased/decreased frequency in waste collections (Table 3a; Figure 3a).

### Capacity of bins - Residential

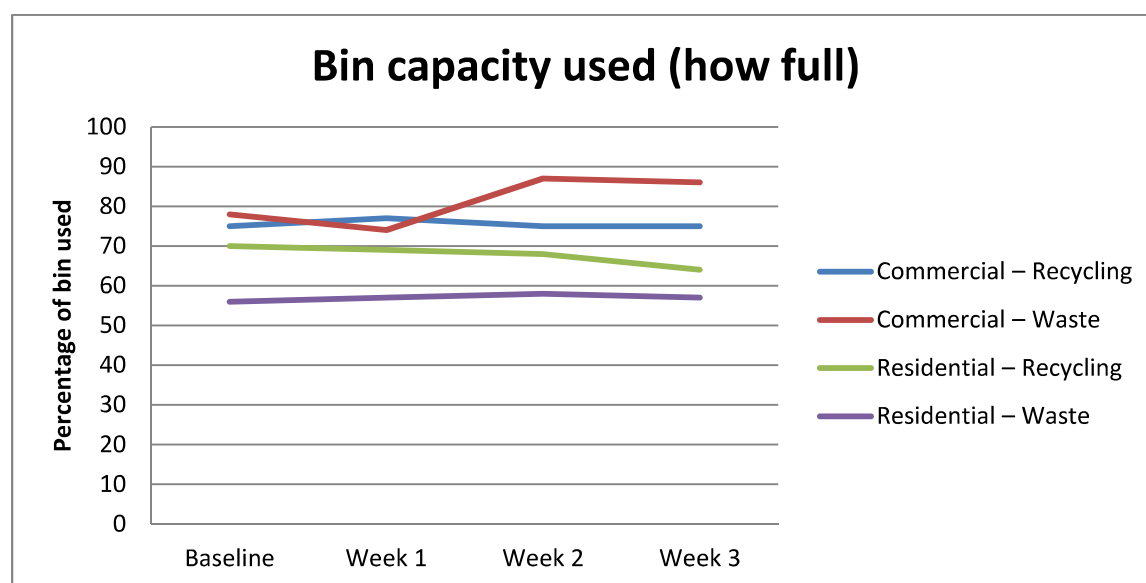
On inspection the capacity of the bin used (how full the bin was) was estimated.

Recycling bins were on average 68% full. This, along with the presentation rates, for recycling bins does not indicate a need for increased/decreased frequency in recycling collections (Table 3a; Figure 3a).

Waste bins were on average 57% full. This, along with the presentation rates, for waste bins does not indicate a need for increased/decreased frequency in waste collections (Table 3a; Figure 3a).

**Table 3a: Percentage of the capacity of bins used – Commercial and Residential**

Percentage of bin 'full'	Baseline	Week 1	Week 2	Week 3	Average
Commercial – Recycling	75	77	75	75	75
Commercial – Waste	78	74	87	86	81
Residential – Recycling	70	69	68	64	68
Residential – Waste	56	57	58	57	57



**Figure 3a: Percentage of bin capacity used – Commercial and Residential**

### Contaminants - Commercial

The top five contaminants placed in recycling bins at the beginning of the trial in order of prevalence were containers and bottles with lids on, dirty soft plastics paper towel or shredded paper, bagged waste and food and organic material,

At the end of the trial, the incidence of all of these contaminants had reduced significantly (Table 4a; Figure 4a).

Table 4a: Prevalence of contamination types in recycling bins- Commercial

Number of Recycling Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Dirty soft plastics	4	1	3	2	50%
Lids left on	12	5	4	5	58%
In plastic bags	2	0	2	0	100%
Food/organics	1	4	1	0	100%
Polystyrene	1	2	0	0	100%
Textiles/clothing	1	2	0	1	0%
Paper Towel/shredded paper	3	0	1	1	67%
Miscellaneous	0	0	1	0	0%

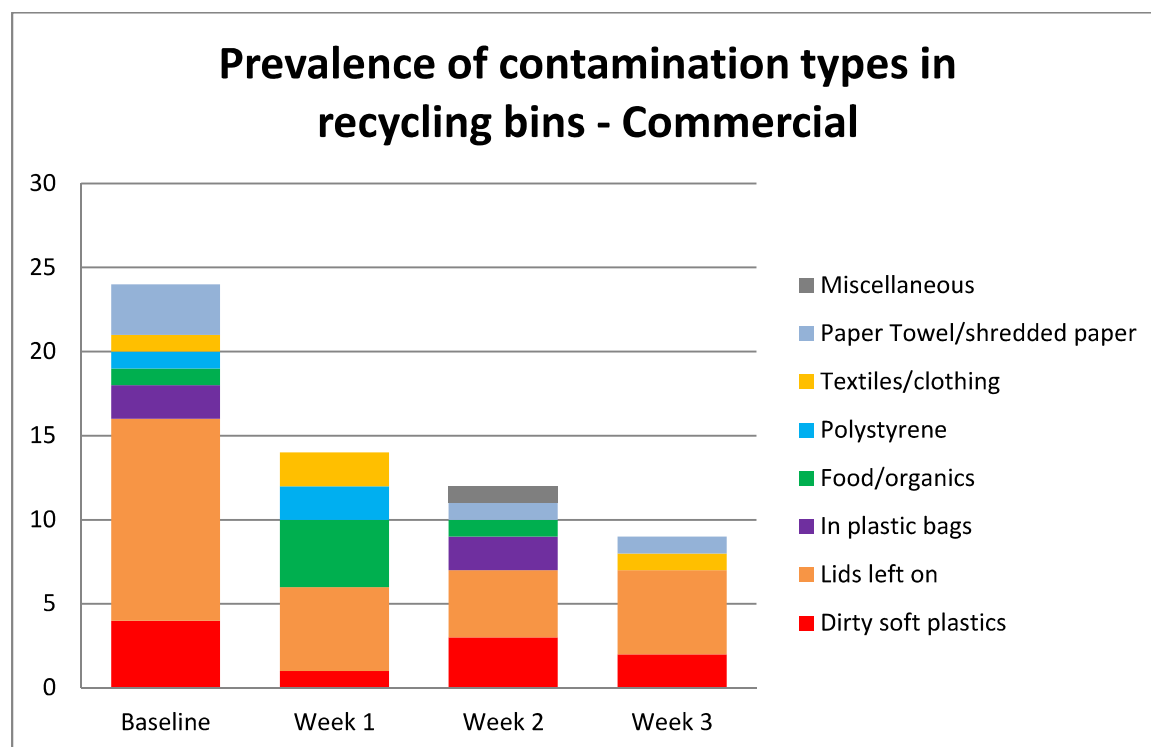


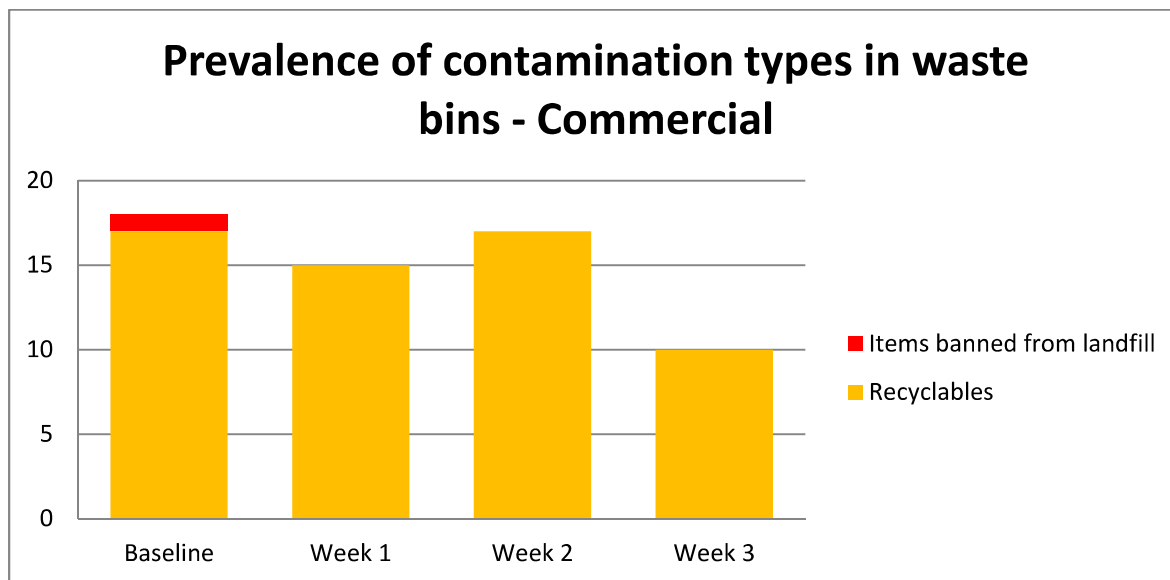
Figure 4a: Prevalence of contamination types in recycling bins - Commercial

Contaminants in the recycling bin that still require further education in the commercial sector include lids left on containers and bottles, dirty soft plastic, paper towel and shredded paper, and textiles and clothing.

The top contaminants placed in waste bins were recyclables, and items banned from landfill. At the end of the trial, the incidence of all contaminants had reduced significantly (Table 5a; Figure 5a).

**Table 5a: Prevalence of contamination types in waste bins - Commercial**

Number of Waste Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Recyclables	17	15	17	10	41%
Items banned from landfill	1	0	0	0	100%

**Figure 5a: Prevalence of contamination types in waste bins - Commercial****Contaminants - Residential**

The top five contaminants placed in recycling bins at the beginning of the trial in order of prevalence were containers and bottles with lids on, food and organic material, paper towel or shredded paper, dirty soft plastics and bagged waste.

At the end of the trial, the incidence of all of these contaminants had reduced significantly (Table 4b; Figure 4b).

Table 4b: Prevalence of contamination types in recycling bins- Residential

Number of Recycling Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Dirty soft plastics	5	4	1	2	60%
Lids left on	41	25	19	28	32%
In plastic bags	3	3	4	2	33%
Food/organics	8	3	2	3	63%
Polystyrene	0	4	3	3	-300%
Textiles/clothing	1	1	5	2	-100%
Paper Towel/shredded paper	7	1	3	2	71%
Miscellaneous	0	2	3	3	-300%

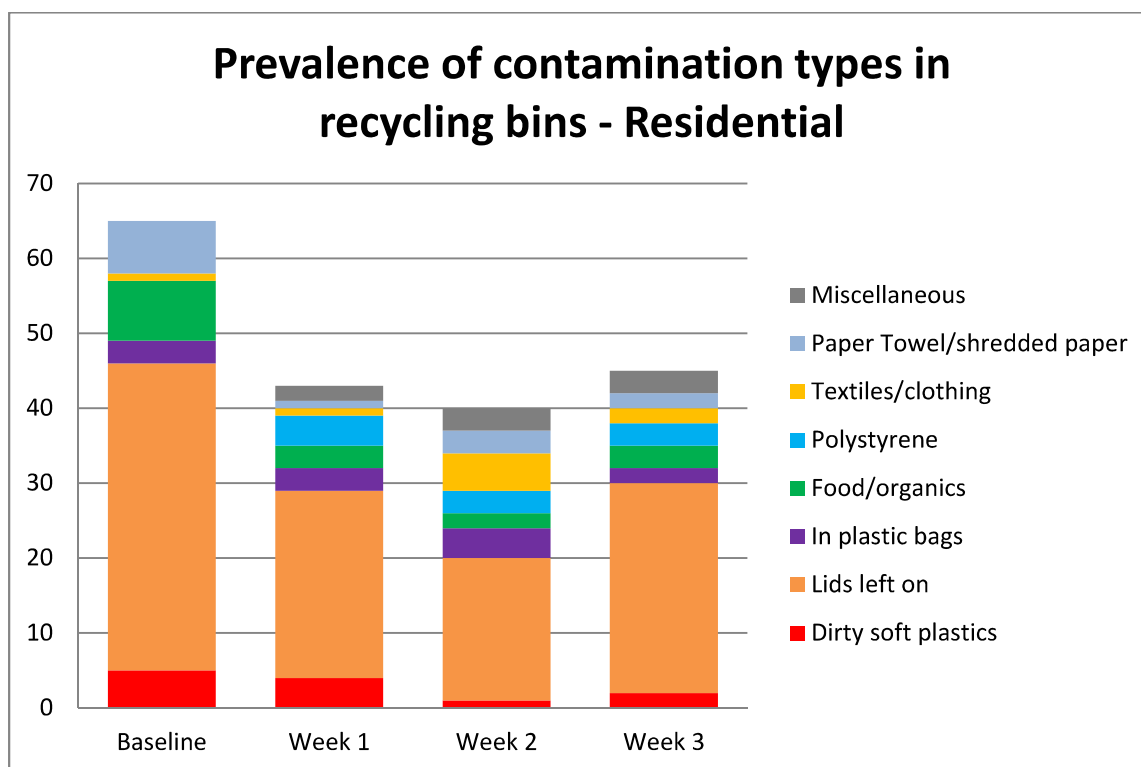


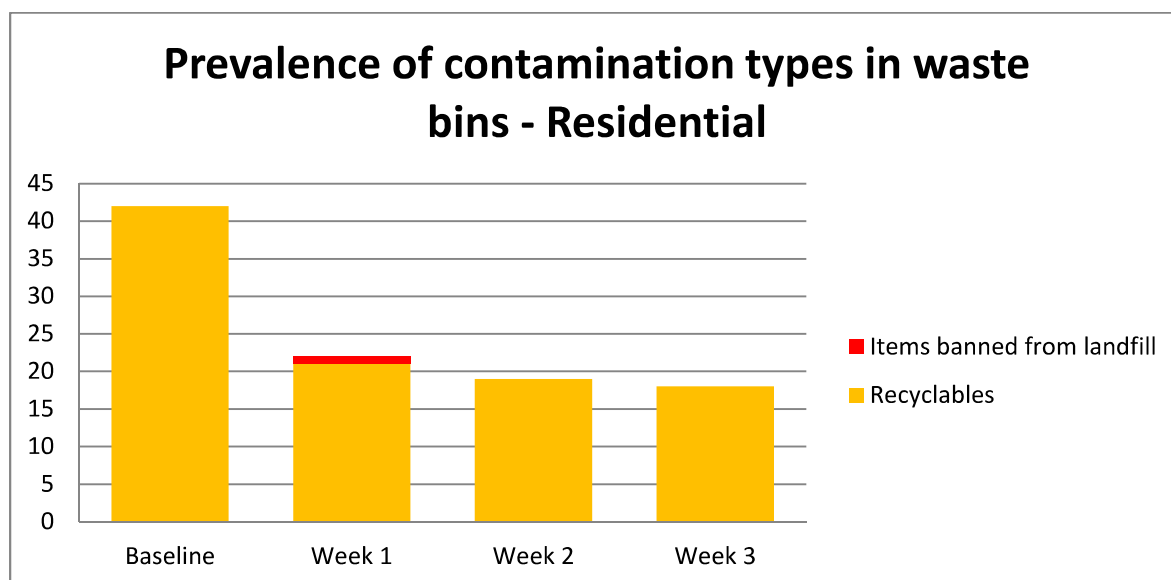
Figure 4b: Prevalence of contamination types in recycling bins - Residential

Contaminants in the recycling bin that still require further education in the residential sector include lids left on containers and bottles, polystyrene, hard waste, dirty soft plastic, and textiles and clothing.

The top contaminants placed in waste bins were recyclables, and items banned from landfill. At the end of the trial, the incidence of all contaminants had reduced significantly (Table 5b; Figure 5b).

**Table 5b: Prevalence of contamination types in waste bins - Residential**

Number of Waste Bins with contaminant	Baseline	Week 1	Week 2	Week 3	% Reduced
Recyclables	42	21	19	18	57%
Items banned from landfill	0	1	0	0	0%

**Figure 5b: Prevalence of contamination types in waste bins - Residential****Level of contamination**

During the collection of data, officers recorded the level of contamination in bins.

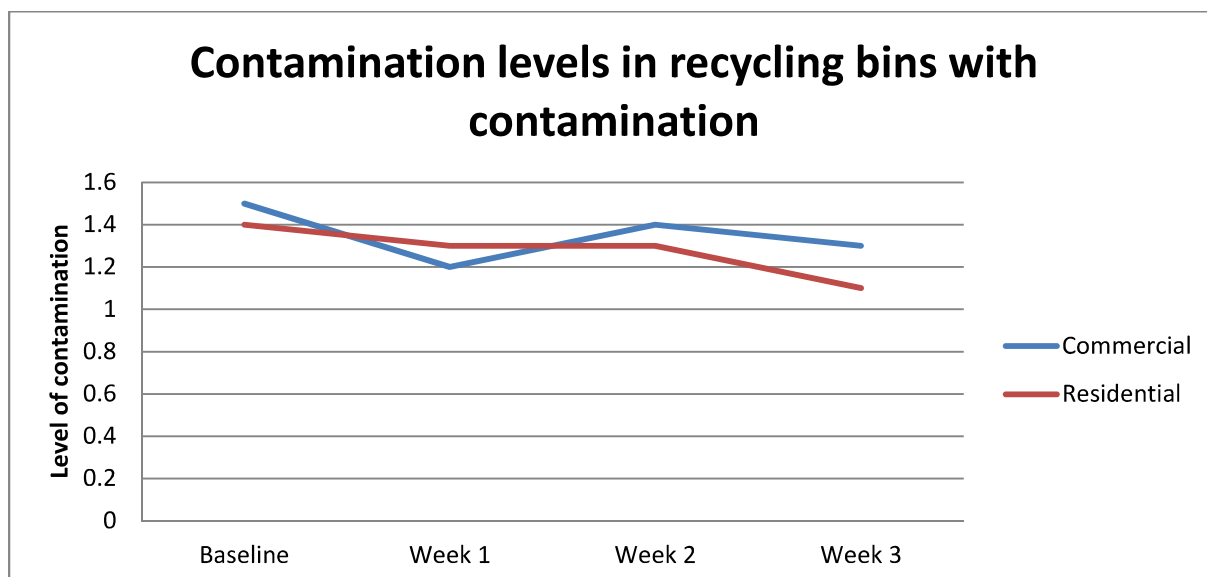
- 1 = less than 10% of the contents were a contaminant
- 2 = between 11–30% of the contents were contaminants
- 3 = gross contamination with more than 30% of the contents contaminants.

Across the trial the level of contamination in commercial recycling bins with contamination decreased **by 8%** and **by 19%** in residential recycling bins.(Table 6a; Figure 6a). However, the averages remained between 1 and 2, thus around 10%.

**Table 6a: Average contamination levels in recycling bins with contamination – Commercial and Residential**

Average contamination levels in recycling bins	Baseline	Week 1	Week 2	Week 3
Commercial	1.5	1.2	1.4	1.3
Residential	1.4	1.3	1.3	1.1





**Table 6a: Average contamination levels in recycling bins with contamination – Commercial and Residential**

### Perfect Bins

The number of properties presenting both bins with the correct contents steadily increased across the trial (Table 7a). During Week 2 and 3, a number of waste bins had been collected prior to inspections. As a result, the number of properties presenting both bins with the correct contents could not be accurately identified.

It should also be noted that properties that did not present one or more bins were excluded from this data yet may not have had contamination in their bins. They may have simply chosen not to present the bin until it was fuller.

Nevertheless, commercial properties presenting both bins with the correct contents rose from 14% at the start of the trial to 25%: **an increase of 88%**. Residential properties presenting both bins with the correct contents rose from 16% at the start of the trial to 41%: **an increase of 150%**.

**Table 7a: Number of properties presenting both bins with the correct contents – Commercial and Residential**

Number of properties presenting both bins with the correct contents	Baseline	Week 1	Week 2	Week 3
Commercial - Actual number of properties	8	12	15	15
Commercial – Percentage	14%	20%	25%	25%
Residential – Actual number of properties	16	27	31	40
Residential – Percentage	16%	28%	32%	41%

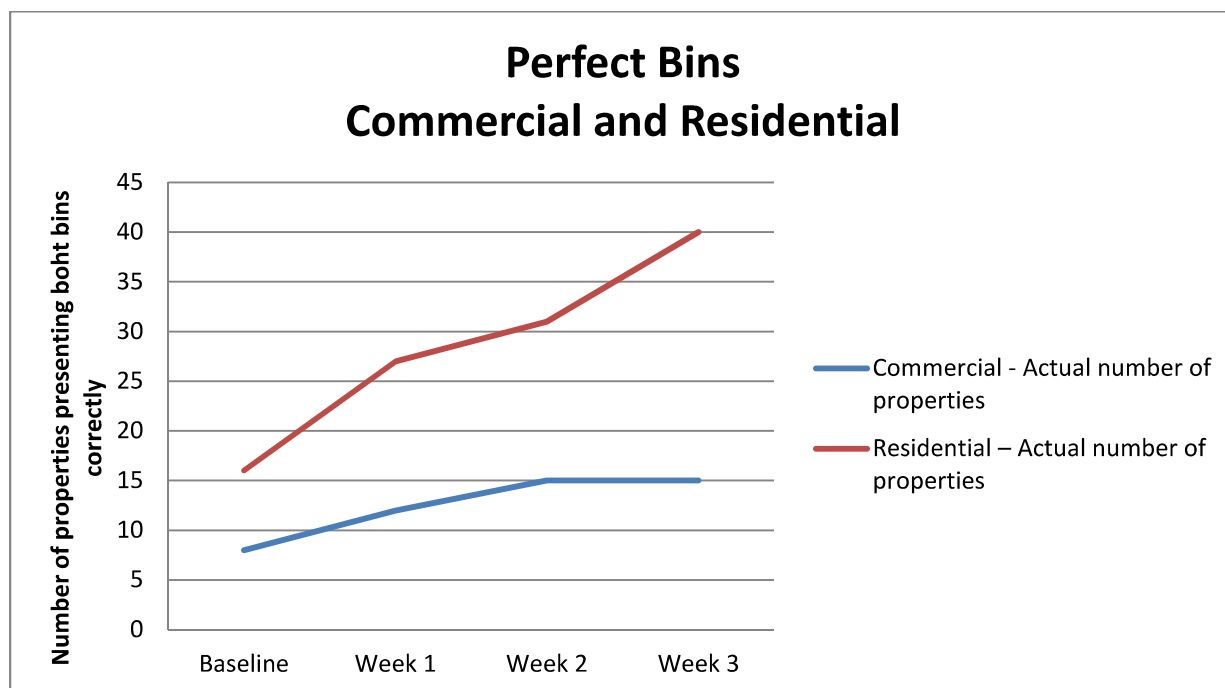


Figure 7a: Number of properties presenting both bins with the correct contents – Commercial and Residential

This demonstrates that the bin tagging program improved the self-efficacy and confidence of householders to use their bins correctly. This comparison shows a significantly greater improvements within the residential sector compared to the commercial sector.

### Enforcement

Properties were notified on the introductory education tag (Appendix 1) that 'bins with too many contaminants may not be collected until contaminants are removed'. Bins would only be tagged that there were not able to be collected if contamination levels at a level 3, that is, were above 30%.

Table 8a: Percentage of bins with gross contamination

% of bins with more than 30% levels of contamination	Baseline	Week 1	Week 2	Week 3
Commercial – Recycling	2 (3.4%)	0 (0.0%)	2 (3.4%)	1 (1.7%)
Commercial – Waste	2 (3.4%)	1 (1.7%)	1 (1.7%)	0 (0.0%)
Residential – Recycling	3 (3.1%)	4 (4.1%)	3 (3.1%)	0 (0.0%)
Residential - Waste	6 (6.1%)	1 (1.0%)	0 (0.0%)	0 (0.0%)

Gross contamination did not present as a major issue with only 3% of recycling bins and 3% of waste bins in the commercial sector and only 3% of recycling bins and 6% of waste bins in the residential sector baseline data grossly contaminated with contamination levels above 30%. Despite not collecting bins from fewer than 1% of households per week, the number of commercial bins with gross

contamination declined significantly across the trial: **50% decrease in presentation of grossly contaminated recycling bins** and **100% decrease in presentation of grossly contaminated waste bins**; The number of residential bins with gross contamination declined significantly across the trial: **100% decrease in presentation of grossly contaminated recycling bins** and **100% decrease in presentation of grossly contaminated waste bins**. It should be noted that the level of contamination in waste bins cannot be accurately identified due to materials being bagged in bin liners.

## RECOMMENDATIONS

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For a greater impact, better ongoing promotion and provision of educational materials is required both during the campaign and in general. Council needs to arm households with knowledge for improving their recycling. Results indicate a need for a focus on educating households on the correct disposal method for lids

### **Recommendation 1: More ongoing education**

The top five contaminants placed in recycling bins at the beginning of the trial in order of prevalence were containers and bottles with lids on, paper towel or shredded paper, food and organic material dirty soft plastics, and bagged waste. At the end of the trial, the incidence of lids being left on bottles and containers had reduced by 38%. However, contaminants that still required education in the community included lids left on containers and bottles, recyclables placed in plastic bags, polystyrene and food and organic material.

The most likely reason for these contaminants initially is lack of knowledge about recycling. A number of education materials, the *Recycle Right@* South East Plastics Fact Sheet and City of Mount Gambier Calendar were created for the program but not distributed during the trial.

The existing City of Mount Gambier A–Z disposal guide, (Appendix 5) could be distributed to letterboxes while collecting baseline data to give residents further information on how to be successful. It could also be distributed when a household receives a ‘sad face’ tag to help educate on how to recycle right.

The existing *Recycle Right@* pull-up banners were adapted for the waste, recycling and green organics bins (Appendix 6). These were displayed in the civic centre throughout the trial but could be used for more direct education with residents in the Mount Gambier Library, local supermarkets or community presentations.

The existing *Recycle Right@* fact sheet ‘The truth about plastics’ has subsequently been adapted for councils in the South East (Appendix 7). Lids left on bottles and containers, polystyrene and bagged recyclables could all be addressed in future by placing this fact sheet on plastics in the letter box at the first inspection or as required by households that present contamination issues relating to these contaminants. This fact sheet shows the need to remove lids, how to recycle lids, and which plastics can and cannot be recycled through kerbside recycling.

As a follow-up to the trial, this fact sheet, and results of the trial, could be placed in rates notices to help households know how to recycle right.

Presentations with local community groups such as Rotary and Probus, and in schools, have proved to be useful ways of engaging the community in what the program is about and encouraging residents to be advocates for the program and recycling right in general. Council could offer presentations to schools and community groups well in advance of future tagging activity.

**Recommendation 2: Include incentives**

The bin tagging program would benefit from a jackpot to provide greater promotion of the bin tagging program, and encourage wider community improvement in recycling. Metropolitan councils have found that most households reacted positively and were interested in winning the prize. The City of Holdfast Shore have used incentives based on the following methodology: During the trial each fortnight a street is chosen and a random house number is selected to win the jackpot prize if recycling correctly. If the recycling bin was contaminated the household would miss out on the prize of a \$50 Jetty Road Gift Card and it would Jackpot to \$100 for the following fortnight.

The jackpot could be promoted through local papers, on the Council phone message and Council website and social media.

Jackpot winners could be interviewed for tips they use with their household to improve recycling habits. Stories could be used each fortnight for further media releases, placed on the Council website and social media.

**Recommendation 3: Advertising and media**

ZWSA has advertisements on many of the main contaminants and poor practice. These could be placed during and/or in the lead up to the bin tagging program in the papers most likely to be read in the area being tagged.

Some metropolitan councils place an advertisement in local papers promoting the jackpot to increase awareness of the program. Council could consider placing a similar advertisement in the lead up or during the program.

Media attention to the bin tagging program can be very helpful in educating the community about why the trial is occurring and how what they can do to improve their recycling behaviours. SELGA developed a number of advertisements (Appendix 7) based on the data of the Bin Tagging Trials which were used during the trial. SELGA also developed pre, during and post media releases (Appendix 8) for the City of Mount Gambier. This material should be used during any future Bin Tagging programs.

**Recommendation 4: Ambassadors as pivotal communicators**

Households do talk with one another and a powerful tool is encouraging good recyclers to be pivotal communicators in their community. Households receiving two or more 'smiley face' tags, could be used to advocate for better recycling through an invitation to:

- place a *Recycle Right*<sup>®</sup> ambassador sticker on their bin
- placing their 'story' on the website
- attending a waste tour to give them an even greater insight
- lunch with the Mayor and other winners as a thank you.

# RECYCLE RIGHT COMES TO MOUNT GAMBIER

The City of Mount Gambier provides households with a two bin kerbside waste and recycling collection service for recycling and waste. However, data from Green Triangle Recyclers, our recycler, shows that some materials are going in to the wrong bin.



## Did you know putting the wrong items in your recycling and green organics bins is a waste?

If the bins are contaminated with unsuitable items these cannot be processed, so the material goes as waste to landfill.

In order to improve the use of our recycling service, Council is implementing the **RECYCLE RIGHT** campaign. This exciting program has seen contamination rates in other councils reduce by as much as 60%

and increased recycling by up to 43%. We know with your help it can help improve our recycling too.

For more details on the **RECYCLE RIGHT** campaign including a complete A-Z listing of recyclable items, visit [www.mountgambier.sa.gov.au](http://www.mountgambier.sa.gov.au) or contact the Council on 8721 2555.



Government of South Australia  
Zero Waste SA



## YOU CAN HELP RECYCLING EVEN MORE

Part of the Recycle Right campaign, will be auditing contents of recycling bins presented for collection in your area. You will be provided with feedback from each inspection in the form of one of three tags attached to your bins:

- **Thank you** – please keep up the great effort.
- **We ask one small favour** – to not place common contaminants like soft plastics, clothing and foam (or polystyrene foam) in the recycling bin.
- **Unfortunately we were unable to collect your bin** – there was too many contaminants in your bin. These will need to be removed before you put your bin out next collection day.

We also need to ensure recyclable material is not going as waste to landfill, so an inspection of your waste bin will also be done at the same time and feedback provided.

### DID YOU KNOW YOU CAN RECYCLE:

- cardboard food packaging such as pizza boxes
- mixed paper
- steel food cans
- plastic take-away containers
- aerosol cans.

**PLEASE REMEMBER** recyclables need to be free of food before placing in the recycling bin.





## PUT IN YELLOW RECYCLING BIN

Put out before  
6am collection day



**GLASS BOTTLES  
AND JARS**  
(not ovenproof glass,  
rinsed, lids off)



**ALUMINIUM  
AND STEEL**  
(rinsed, lids off,  
same bin)



**HARD PLASTICS,  
CARTONS**  
(rinsed, lids off)



**PAPER AND  
CARDBOARD**  
(not shredded  
or tied)

X

## LEAVE OUT

  
**CLOTHING/  
FABRICS**

  
**ORGANIC  
WASTE**

  
**GARDENING  
TOOLS**

  
**PLASTIC BAGS/  
WRAP/BIN LINERS**

  
**FOOD  
SCRAPS**

  
**NAPPIES (inc.  
biodegradable)**

  
**HAZARDOUS  
MEDICAL WASTE**

  
**BUILDING  
MATERIALS**

  
**FOAM CUPS/  
FOOD TRAYS**

  
**CROCKERY**

  
**ELECTRONIC  
APPLIANCES**

  
**LIGHT  
GLOBES**



**RECYCLE RIGHT**



Government  
of South Australia  
Zero Waste SA



Local  
Government  
Association  
of South  
Australia



**VISY**  
FOR A BETTER WORLD

[www.zerowaste.sa.gov.au](http://www.zerowaste.sa.gov.au)      **1300 137 118**

**DON'T LET YOUR RECYCLING GO TO WASTE.**

**ZER0008 Yellow Stickers – WOW Schools & Extras ZWSA**

Size: 148mm W x 210mm H with rounded corners  
4 colour process. Please ensure colours are consistent across all items of this pack.



Appendix 3: Bin tags for recycling bins (3 versions of front and 1 of the back)

**THANK YOU!** 

Your efforts help recycle valuable resources.

 Glass bottles and jars	 Hard plastics, cartons
 Aluminium and steel	 Paper and cardboard
 <b>CLEAN</b> soft plastics (cling film, newspaper wrap, bubble wrap)	 <b>REMOVE</b> lids and place lids in the waste bin

**RECYCLING RIGHT:**

- ✓ Saves water, energy and resources
- ✓ Reduces waste to landfill
- ✓ Reduces harmful greenhouse gases
- ✓ Is more cost effective

 **RECYCLE RIGHT**  
Government of South Australia  
Zero Waste SA

 **BLUE LAKE CITY**  
City of Mount Gambier

zerowaste.sa.gov.au      mountgambier.sa.gov.au

**WE ASK ONE SMALL FAVOUR** 

Please do not place these contaminants in your recycling bin.

 <b>NO</b> nappies	 <b>NO</b> polystyrene
 <b>NO</b> clothing or textiles	 <b>NO</b> food scraps or other green organic matter
 Ensure containers are free of food	 <b>REMOVE</b> lids and place lids in the waste bin
 <b>NO</b> dirty or foil lined soft plastics	 <b>NO</b> recyclables in plastic bags (place loose in the recycling bin)

Other  \_\_\_\_\_

**THANK YOU FOR YOUR EFFORTS**

 **RECYCLE RIGHT**  
Government of South Australia  
Zero Waste SA

 **BLUE LAKE CITY**  
City of Mount Gambier

zerowaste.sa.gov.au      mountgambier.sa.gov.au

**WE WERE NOT ABLE TO COLLECT YOUR BIN TODAY.** 

Please remove the following contaminants from your recycling bin. Your bin will then be collected on the next recycling collection.

 <b>NO</b> nappies	 <b>NO</b> polystyrene foam
 <b>NO</b> clothing or textiles	 <b>NO</b> food scraps or other green organic matter
 Ensure containers are free of food	 <b>NO</b> pillows & quilts
 <b>NO</b> dirty or foil lined soft plastics	 <b>NO</b> recyclables in plastic bags (place loose in the recycling bin)

Other  \_\_\_\_\_

**THANK YOU FOR YOUR EFFORTS**

 **RECYCLE RIGHT**  
Government of South Australia  
Zero Waste SA

 **BLUE LAKE CITY**  
City of Mount Gambier

zerowaste.sa.gov.au      mountgambier.sa.gov.au

**RECYCLE RIGHT**

 Please place your bins out the night before your bin collection day and bring them in within 24 hours.

 Ensure your bin lid is able to close.

 Give containers a **QUICK** rinse to ensure they are free of food.

 Flatten boxes and do not bundle papers or cardboard. Place items loosely in the bin.

**What DOES NOT go in your recycling bin**

 <b>NO</b> nappies	 <b>NO</b> polystyrene
 <b>NO</b> food scraps or other green organic matter	 <b>REMOVE</b> lids and place lids in the waste bin
 <b>NO</b> clothing or textiles	 <b>NO</b> dirty or foil lined soft plastics

 **DO NOT** place recyclables in plastic bags, simply place all items loose in the recycling bin

**THANK YOU FOR YOUR EFFORTS**

 **RECYCLE RIGHT**  
Government of South Australia  
Zero Waste SA

 **BLUE LAKE CITY**  
City of Mount Gambier

zerowaste.sa.gov.au      mountgambier.sa.gov.au



Appendix 3: Bin tags for waste bins (2 versions of front and corresponding backs)

**THANK YOU!** 

We didn't see any recyclables in your waste bin.  
What **DOES GO IN** your waste bin:

-  Polystyrene
-  Broken drinking glasses, crockery and overware
-  Clothing and textiles
-  Nappies
-  Dirty or foil lined soft plastics

**USING YOUR WASTE BIN RIGHT:**

- ✓ Saves water, energy and resources
- ✓ Reduces harmful greenhouse gases
- ✓ Is more cost effective

zerowaste.sa.gov.au    mountgambier.sa.gov.au

**WE ASK ONE SMALL FAVOUR** 

Some things are better recycled so please do not place these in your waste bin.

-  **NO** recyclables (these go in the recycling bin) cans, bottles and jars, hard plastic containers and paper
-  **NO** e-waste (take to an e-waste recycler)
-  **NO** light globes (take to Banner Mitre 10 or Council's Waste Transfer Station)

**THANK YOU FOR YOUR EFFORTS**

zerowaste.sa.gov.au    mountgambier.sa.gov.au

**USING YOUR WASTE BIN RIGHT:**

-  Please place your bins out the night before your bin collection day and bring them in within 24 hours.
-   Ensure your bin lid is able to close.

What **DOES NOT** go in your waste bin:

-  **NO** recyclables (go in the recycling bin)
-  **NO** e-waste (take to an e-waste recycler)
-  **NO** light globes (take to Banner Mitre 10 or Council's Waste Transfer Station)

 **RECYCLE RIGHT!**

**CLEAN** soft plastics (cling film, newspaper wrap, bubble wrap) can go in the **RECYCLING** bin.  
**DIRTY** or foil lined soft plastics go in the **WASTE** bin.  
**DO NOT** place recyclables in plastic bags, simply place all recyclables loose in the recycling bin.

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**USING YOUR WASTE BIN RIGHT:**

-  Please place your bins out the night before your bin collection day and bring them in within 24 hours.
-   Ensure your bin lid is able to close.

What **DOES GO IN** your waste bin:

-  Polystyrene
-  Clothing and textiles
-  Broken drinking glasses, crockery and overware
-  Nappies
-  Dirty or foil lined soft plastics (including chip packets)

zerowaste.sa.gov.au    mountgambier.sa.gov.au



**Bin Collection Week**

Your waste bin is collected every week. Your green organics bin and recycling bin are collected fortnightly on alternate weeks

- Waste bin
- Green organics bin week - user pays
- Recycling bin week

**Collection Day**

- Monday
- Monday Conroe Heights
- Wednesday
- Thursday
- Friday
- Tuesday

Please place bins out by 6am for collection.

**JULY 2015**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	8	9	10	11	12	
13	13	14	15	16	17	18	19
20	20	21	22	23	24	25	26
27	27	28	29	30	31		

**AUGUST 2015**

M	M	T	W	T	F	S	S
						1	2
3	3	4	5	6	7	8	9
10	10	11	12	13	14	15	16
17	17	18	19	20	21	22	23
24	24	25	26	27	28	29	30
31	31						

**SEPTEMBER 2015**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	8	9	10	11	12	13
14	14	15	16	17	18	19	20
21	21	22	23	24	25	26	27
28	28	29	30				

**OCTOBER 2015**

M	M	T	W	T	F	S	S
			1	2	3	4	
5	5	6	7	8	9	10	11
12	12	13	14	15	16	17	18
19	19	20	21	22	23	24	25
26	26	27	28	29	30	31	

**NOVEMBER 2015**

M	M	T	W	T	F	S	S
							1
2	2	3	4	5	6	7	8
9	9	10	11	12	13	14	15
16	16	17	18	19	20	21	22
23	23	24	25	26	27	28	29
30	30						

**DECEMBER 2015**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	7	8	9	10	11	12
13	14	14	15	16	17	18	19
20	21	21	22	23	24	25	26
27	28	28	29	30	31		

**JANUARY 2016**

M	M	T	W	T	F	S	S
						1	2
3	4	4	5	6	7	8	9
10	11	11	12	13	14	15	16
17	18	18	19	20	21	22	23
24	25	25	26	27	28	29	30
31							

**FEBRUARY 2016**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	8	9	10	11	12	13
14	15	15	16	17	18	19	20
21	22	22	23	24	25	26	27
28	29	29					

**MARCH 2016**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	7	8	9	10	11	12
13	14	14	15	16	17	18	19
20	21	21	22	23	24	25	26
27	28	28	29	30	31		

**APRIL 2016**

M	M	T	W	T	F	S	S
						1	2
3	4	4	5	6	7	8	9
10	11	11	12	13	14	15	16
17	18	18	19	20	21	22	23
24	25	25	26	27	28	29	30

**MAY 2016**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	7	8	9	10	11	12	13
14	15	15	16	17	18	19	20
21	22	22	23	24	25	26	27
28	29	29	30	31			

**JUNE 2016**

M	M	T	W	T	F	S	S
			1	2	3	4	5
6	6	7	8	9	10	11	12
13	13	14	15	16	17	18	19
20	20	21	22	23	24	25	26
27	27	28	29	30			

## KERBSIDE COLLECTION CALENDAR 2015-2016

SECTION 1 - USING YOUR CALENDAR

SECTION 2 - BIN COLLECTIONS

SECTION 3 - WASTE BIN

SECTION 4 - RECYCLING BIN

SECTION 5 - GREEN ORGANICS BIN

SECTION 6 - FOOD SCRAPS

SECTION 7 - RECYCLE AND WASTE TRANSFER CENTRES

# What to recycle and where in Mount Gambier

YOUR A-Z guide for product recycling or disposal



“

Each year Mount Gambier residents send over  
**5,600 tonnes of rubbish**  
to Caroline Landfill via their general rubbish bins.  
**Over 50%** of this does not need to be buried in  
landfill, but can be recycled or turned into compost.

”

# GREEN ORGANICS



# RECYCLE RIGHT



# WASTE BIN







To save water, rinse your recyclables after washing the dishes.

For a **RECYCLE RIGHT** fact sheet contact Council.



Place all lids in the **WASTE** bin.

For a **RECYCLE RIGHT** fact sheet contact Council.



RECYCLING  
**BIN**  
TIP:10



If it's in good condition  
donate it to a local charity  
otherwise place in your **WASTE BIN**.

For a **RECYCLE RIGHT** fact sheet  
contact Council.



RECYCLING  
**BIN**  
TIP:16



Polystyrene foam  
packaging (including  
foam meat trays and cups)  
goes in the **WASTE BIN**.

For a **RECYCLE RIGHT** fact sheet  
contact Council.



## **SOUTH EAST LOCAL GOVERNMENT ASSOCIATION INC**

**Incorporated under the provisions of The Local Government Act**

**C/- PO Box 1445**

*Mount Gambier 5290*

Forestry SA Building

152 Jubilee Highway East

**Mount Gambier**

**Phone: 08 8723 1057**

**Fax: 08 8723 1286**

[Business Hours - 9.00 am to 5.00 pm - Monday to Friday](#)

Wednesday, 21 January 2015

**FOR IMMEDIATE RELEASE**

**President:**

### **RECYCLE RIGHT COMES TO MOUNT GAMBIER**

**Mayor Erika Vickery**

Recycling our waste is better for the environment through preventing a renewable resource going to waste and also saves our community money from lower processing costs.

**Executive Officer:**

**Ann Aldersey**

The City of Mount Gambier provides households with a two bin kerbside waste and recycling collection service. However, our 2012 kerbside waste composition audit data shows that some material is going in to the wrong bin.

**Member Councils:**

**City of:**

The City of Mount Gambier Mayor Andrew Lee said today that, 'If the bins are contaminated with unsuitable items these cannot be processed, so the material goes as waste to landfill. In order to improve the use of our recycling service, Council is implementing the Recycle Right campaign with the support of Zero Waste SA and the South East Local Government Association.'

**Mount Gambier**

**Districts of:**

**Grant**

Daniel Willsmore, Regional Waste Management Coordinator for the South East Local Government Association said, 'The Recycle Right campaign was recently carried out in the Naracoorte Lucindale Council area with outstanding results. Of the area inspected, recycling bin contamination reduced by 55% and waste bin contamination reduced by 65%. By the end of the campaign households presenting both bins with the correct contents increased by 56%.'

**Kingston**

**Naracoorte Lucindale**

**Robe**

'The challenge has now been set for our residents to better these results.' Mayor Lee added.

**Tatiara**

**Wattle Range**

The Recycle Right campaign will be inspecting contents of recycling bins presented for collection in a select area. Residents within this area will be provided with feedback from each inspection in the form of tags attached to their bins. To ensure recyclable material is not going as waste to landfill, an inspection of the waste bin will also be done at the same time and feedback provided.

ENDS

**SOUTH EAST LOCAL GOVERNMENT ASSOCIATION INC**  
Incorporated under the provisions of The Local Government Act

**CI- PO Box 1445**

*Mount Gambier 5290*

Forestry SA Building  
152 Jubilee Highway East

**Mount Gambier**

**Phone: 08 8723 1057**

**Fax: 08 8723 1286**

**Business Hours - 9.00 am to 5.00 pm - Monday to Friday**

Tuesday, 24 March 2015

**FOR IMMEDIATE RELEASE**

**MOUNT GAMBIER ON A QUEST TO RECYCLE RIGHT**

**President:**

**Mayor Erika Vickery**

**Executive Officer:**

**Ann Aldersey**

**Member Councils:**

**City of:**

**Mount Gambier**

**Districts of:**

**Grant**

**Kingston**

**Naracoorte Lucindale**

**Robe**

**Tatiara**

**Wattle Range**



Rubbish and recycling bins in Mount Gambier have been getting a little extra attention lately, thanks to the Recycle Right Program being run by Local Government.

Results from a recent survey of recycling and waste bins found that 62% of recycling bins presented had some form of contamination, and 46% of waste bins had recyclables going to waste; which should have been in the recycling bin. It costs Council approximately 50% more to dispose of waste to landfill when compared to processing recyclable material.



The City of Mount Gambier Mayor Andrew Lee said today that, "Using your kerbside bins is a great way to save resources, water and energy but the key to its success is making sure we use right bin."

"Unfortunately, we don't always put the right thing in the right bin."

"Currently in the City of Mount Gambier we are diverting around 45% of our kerbside waste from landfill and into recycling and reuse but we can do better. The same three bin service in other areas diverts on average 55% of household waste."

"This starts," Mayor Lee added, "by improving our recycling services, so Council is implementing the Recycle Right campaign."

"Everyone's efforts will make recycling safer, more efficient and cost effective."

The campaign is being conducted during March and April by Council with the support of Zero Waste SA and the South East Local Government Association.

Daniel Willsmore, Regional Waste Management Coordinator for the South East Local Government Association said, "We will provide selected households involved each fortnight with feedback in the form of bin tags.

"The tags have been designed to let residents know what they are doing well and if there is anything they can do to Recycle Right."

"The tag will either thank residents who are recycling right or ask 'one small favour' with a tip relating to removing the contaminants most prevalent in their recycling bin."

Zero Waste SA added that the same program carried out in the Naracoorte Lucindale Council resulted in a reduction in the number of contaminated recycling bins by 55%.

ENDS

# THE TRUTH ABOUT PLASTICS

FOR HOUSEHOLDERS IN SOUTH AUSTRALIA'S SOUTH EAST.



Many of us have been tricked into using the triangular symbol with a number inside to identify what can be recycled.

But this symbol is **NOT** a recycling symbol. It is a plastics identification code used to tell manufacturers what type of plastic the item is made from.



## WHAT PLASTICS CAN BE RECYCLED?















In the South East, all **CLEAN** soft plastics and rigid plastic containers can be recycled. This includes:

- plastic bottles and containers
- bread bags, plastic bags, frozen food bags.



Please **REMOVE** lids before recycling and place plastic lids in the **WASTE** bin.

Here's a quick guide to plastics showing the plastic code that **CAN** and **CANNOT** be placed in your recycling bin.

Symbol	Type of plastic	Types of containers	Accepted in your recycle bin?
	Polyethylene Terephthalate <b>PET</b>	Carbonated soft drink bottles, detergent bottles.	
	High Density Polyethylene <b>HDPE</b>	Milk and cream bottles, shampoo bottles, cleaning products.	
	Polyvinyl Chloride <b>PVC</b>	Clear cordial and juice bottles.	
	Low Density Polyethylene <b>LDPE</b>	Squeeze bottles.	
	Polypropylene <b>PP</b>	Ice cream containers and lids, plastic take away containers.	
	Polystyrene <b>PS</b>	Yoghurt containers and margarine/ butter containers.	
	Polystyrene <b>EPS</b>	Expanded polystyrene such as foam including packaging, packing 'peanuts', foam meat trays and foam cups.	

Still unsure about what to put in your bins?  
Contact your council for more information.



Appendix 10: City of Mount Gambier Refuse Collection Policy

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	<b>COUNCIL POLICY</b> <b>W125 WASTE MANAGEMENT-</b> <b>REFUSE COLLECTION</b>	<b>Version No:</b>	1 <sup>64</sup>
		<b>Issued:</b>	17 <sup>th</sup> July, 2014
		<b>Next Review:</b>	July, 2016

## 1. INTRODUCTION

This document sets out the policy of the City of Mount Gambier (“Council”) for the collection of refuse within the Council area.

## 2. HOUSEHOLD/PUTRESCIBLE WASTE AND RECYCLABLES (EXCLUDING ORGANIC-WASTE AND E-WASTE)

- (a) Council will provide a weekly putrescibles waste collection (excluding organic-waste) to all rateable premises within the Council area and on which an occupied building is erected. A fortnightly recyclable collection service will be provided to the same properties. The collection day for each premises shall be determined by the Director - Operational Services and/or the Engineering Manager.
- (b) Each rateable premises (on which an occupied building is erected) will be entitled to place out for collection, on the nominated day, one 140 litre mobile garbage bin (MGB) (green body – red lid), for household and putrescibles waste; and on the nominated collection day, one 240 litre MGB for recyclables (blue body – yellow lid).
- (c) The MGB’s will be supplied by Council and will be collected by Council at no charge. Only bins supplied by Council will be collected.
- (d) Any MGB that is lost, stolen, damaged or otherwise deemed non-useable (fair wear and tear excepted) is to be replaced by the landowner at the landowner's expense.
- (e) Under no circumstances is greenwaste to be deposited in the red lid MGB placed out for weekly collection. Council reserves the right not to collect a MGB with greenwaste (or prescribed waste as defined later). Warnings may be issued to owner/occupiers found to be not complying with this requirement. Continued breaches of this requirement may result in a suspension to the collection service for two weeks.
- (f) Under no circumstances are non-recyclable materials to be deposited in the yellow lid recycling MGB placed out for fortnightly collection. Council reserves the right not to collect a recycling MGB which contains non-recyclable waste. Warnings may be issued to owner/occupiers found to be not complying with this requirement. Continued breaches of this requirement may result in a suspension to the collection service for two weeks. Acceptable recyclable materials include:
  - Paper and cardboard.
  - Cartons.
  - Plastics 1-5 (not 6 & 7).
  - Glass bottles and jars (not broken).
  - Tins and cans.
- (g) Occupiers of flats and/or home units may share a MGB if they desire.
- (h) Non-rateable premises requiring a weekly collection of putrescibles waste, will receive such service on the payment of a fee (refer Fees and Charges Schedule, plus GST if applicable) per annum, which includes the supply and emptying of the bin on a weekly basis.
- (i) Council agrees to supply and collect, at no additional cost, a second MGB (to maximum size 140 litre) for residents who require dialysis treatment. This collection will only be available whilst the dialysis treatment is necessary.

	<b>COUNCIL POLICY</b> <b>W125 WASTE MANAGEMENT-</b> <b>REFUSE COLLECTION</b>	<b>Version No:</b>	1 <sup>65</sup>
		<b>Issued:</b>	17 <sup>th</sup> July, 2014
		<b>Next Review:</b>	July, 2016

### 3. ORGANIC WASTE COLLECTION

- (a) Council will provide, on a fee for service basis, a fortnightly organic waste collection service to premises within the Council area and on which there is erected an occupied building. The collection day for each premise shall be determined by the Director - Operational Services and/or the Engineering Manager.
- (b) Council will collect one 240 litre mobile garbage bin (MGB) (green body – green lid) of organic waste per fortnight from premises that have paid the appropriate fee and whose bin displays the appropriate tag placed on the handle of the MGB.
- (c) Only organic material is to be placed in the 240 Litre MGB. Organic waste includes all types of organic garden waste, lawn clippings, food scraps (can be wrapped in newspaper), meat, bones, etc. Clean and uncontaminated organic waste is of paramount importance to the long term viability of the organic waste collection and disposal service.
- (d) MGB's detected to be containing anything other than approved organic waste will not be collected and a formal warning given to the owner/occupier. Repeat breaches may result in a suspension of the service (without any refund of monies) for two collection periods (i.e. 4 weeks).
- (e) Non-rateable premises are able to utilise this service under the same terms and conditions as rateable premises.
- (f) Council will allow a premises to have in excess of one 240 litre MGB for the organic waste collection service and will collect each bin as a separate service, attracting an equivalent fee as the first service.
- (g) The annual cost of the organic waste collection service will be reviewed annually by Council (refer to the Fees and Charges Schedule).
- (h) On payment of the prescribed fee, occupiers will be issued with a coloured tag to be placed on the handle of the organic waste bin. Only bins displaying the tag appropriate to the current year will be collected.
- (i) MGB's are not to be overfilled so that refuse collectors cannot see the tag - in these instances the refuse collectors are entitled to leave the bin unemptied.
- (j) Users of the system are to ensure that the total weight of the MGB does not exceed 75kg (wet grass clippings can be extremely heavy), or the volume does not exceed 240 litres.

### 4. GENERAL

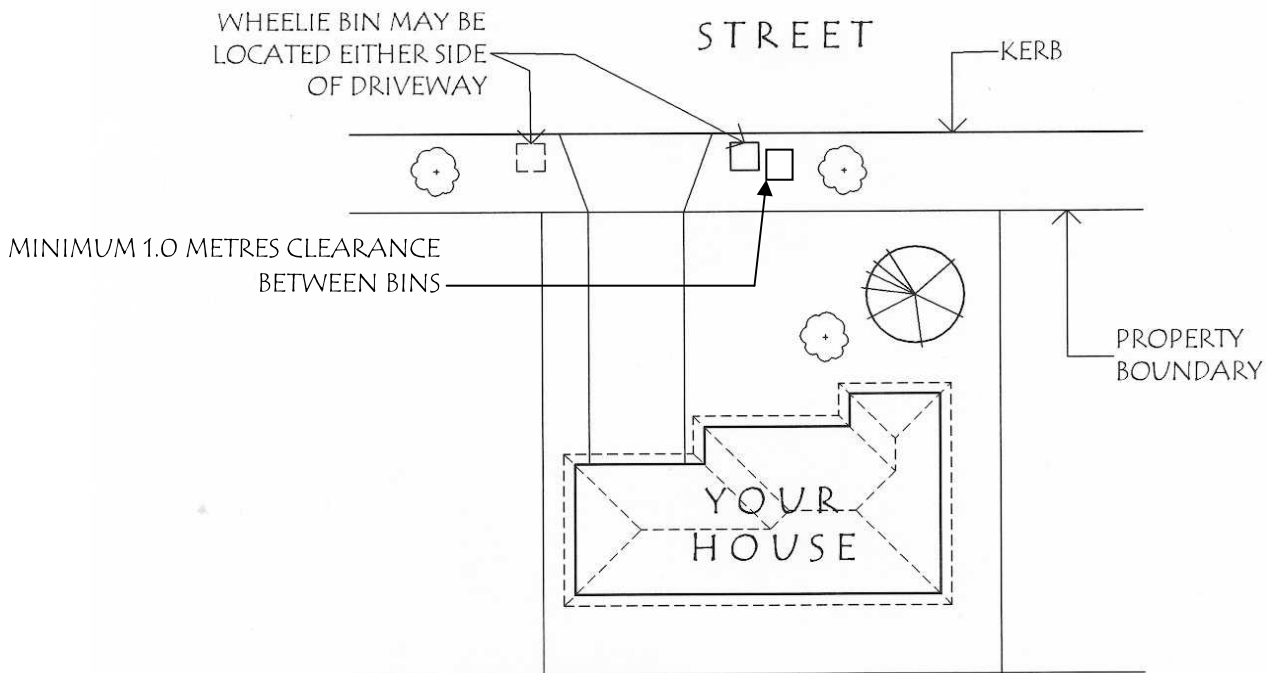
- (a) All MGB's placed out for collection must be positioned in accordance with the attached plan, and must be at least 1m apart.
- (b) MGB's for collection shall be placed in the appointed place for collection by 6.00 a.m. on the nominated collection day for that premises (including Public Holidays).
- (c) The following materials are prohibited from being placed out for collection:

	<b>COUNCIL POLICY</b> <b>W125 WASTE MANAGEMENT-</b> <b>REFUSE COLLECTION</b>	<b>Version No:</b>	1 <sup>66</sup>
		<b>Issued:</b>	17 <sup>th</sup> July, 2014
		<b>Next Review:</b>	July, 2016

- (i) prescribed wastes as listed in Schedule 1, Part B, of the *Environment Protection Act*. This does not apply to empty contaminated herbicide, fungicide and pesticide containers, that are less than four (4) litres capacity; and the contents of which have been used for domestic purposes;
  - (ii) potentially explosive material;
  - (iii) liquid wastes
  - (iv) hot ashes;
  - (v) commercial and industrial wastes;
  - (vi) E-waste and fluorescent lighting;
- (d) Hard materials such as metals, stone, paper etc are not to be deposited in the organic waste MGB.
- (e) The following constitutes grounds for refusal to make collection of refuse placed out for collection:
- (i) the MGB contains matter prohibited by this policy;
  - (ii) the contents of the MGB are flyblown;
  - (iii) the MGB was late being placed out for collection, or was not positioned in accordance with this policy;
  - (iv) the MGB was placed out for collection in front of a premises which did not have an occupied building on it;
  - (v) rubbish was jammed or stuck in the MGB;
  - (vi) the MGB was over filled or plastic liners were not enclosed inside the MGB;
  - (vii) the MGB was too heavy;
  - (viii) for organic waste disposal - the MGB did not display the correct colour coded tag on the lid, or the tag was not visible at the time of collection.
- (f) Where rubbish has not been collected in accordance with this policy, notice shall be left at the premises giving the reason the collection was not made.
- (g) At the refuse collector's discretion a collection may be made which could have been refused pursuant to this policy. In such cases, a notice shall be left at the premises advising that future collections will not be made unless specified remedial action is taken by the owner/occupier.



<b>Version No:</b>	1 <sup>67</sup>
<b>Issued:</b>	17 <sup>th</sup> July, 2014
<b>Next Review:</b>	July, 2016



**5. REVIEW & EVALUATION**

This Policy is scheduled for review by Council in July 2016; however, will be reviewed as required by any legislative changes which may occur.

**6. AVAILABILITY OF POLICY**

This Policy will be available for inspection at Council's principal office during ordinary business hours and on the Council's website [www.mountgambier.sa.gov.au](http://www.mountgambier.sa.gov.au). Copies will also be provided to interested members of the community upon request, and upon payment of a fee in accordance with Council's Schedule of Fees and Charges.

	<b>COUNCIL POLICY</b> <b>W125 WASTE MANAGEMENT- REFUSE COLLECTION</b>	<b>Version No:</b>	1 <sup>68</sup>
		<b>Issued:</b>	17 <sup>th</sup> July, 2014
		<b>Next Review:</b>	July, 2016

File Reference:	AF11/1743
Applicable Legislation:	Environment Protection (Waste to Resources) Policy 2010
Reference: Strategic Plan – Beyond 2015	Goal 5, Strategic Objective 5
Related Policies:	W115 WASTE MANAGEMENT - Receival of Waste - Caroline Landfill
Related Procedures:	Relevant SOP's
Related Documents:	Schedule of Fees and Charges

#### DOCUMENT DETAILS

Responsibility:	DIRECTOR – OPERATIONAL SERVICES
Version:	1.0
Last revised date:	17 <sup>th</sup> July, 2014
Effective date:	17 <sup>th</sup> July, 2014
Minute reference:	OPS Item 12, Operational Services Report No. 17/2014, 17 <sup>th</sup> July, 2014
Next review date:	July, 2016
<u>Document History</u>	
First Adopted By Council:	20 <sup>th</sup> June 2000
Reviewed/Amended:	15 <sup>th</sup> April 2003; 19 <sup>th</sup> September 2006; 17 <sup>th</sup> February 2009; 17 <sup>th</sup> July, 2014





Title: **Energy Review**

Author: Quentin Roberts      Client: Zero Waste SA  
 Contact: [quentin.roberts@efficientsee.com.au](mailto:quentin.roberts@efficientsee.com.au)      Site: Mt Gambier Aquatic Centre  
 Publish Date: Mar-15      Location: Mt Gambier, SA  
 Project: 15002      Version: B2      Cust Ref: City of Mount Gambier

**WHO WE ARE**

EfficientSee Pty Ltd is a consulting company specialising in energy and engineering services relating to the delivery of efficiency projects for commercial and industrial environments in Australia.

Our experience includes sectors such as Manufacturing, Automotive, Food & Beverage, Water/Waste-water treatment, Mining, Pharmaceutical, Local Government, Commercial Buildings, Not-for-profit, Education and Health & Community Services.

**CORE STRENGTHS**

- Grant Application Assistance
- Carbon Footprint Minimisation Strategies
- Energy Monitoring / Sub-metering Solutions
- Process Improvement (Industrial Automation)
- Energy Efficiency Opportunities (EEO)
- Energy Audits/Assessments (AS 3598:2000)
- Efficiency Projects Delivery
- Energy Management Programs (ISO50001)
- SEE-Tick™ Accreditation

**“We are passionate about Australian business innovation, which is why we endeavour to put Australian businesses at the forefront through enhanced sustainability and efficiency.”**

There are three guiding principles that drive our organisation toward success;

**PARTNERSHIP**

We understand that improving efficiency is not an event but a journey of continuous improvement. Hence we employ an approach of partnering with businesses on their journey to efficiency.

**PROFESSIONALISM**

We strive for excellence in delivering our services to clients. We believe the best way to show we value our clients is to serve them with the utmost professionalism. This principle guides everything from our communication through to personal presentation.

**PRODUCTIVITY**

Simply put, we aim to get the best value from both our time and your time. We believe this to be the key for ongoing prosperity and ultimately sustainability.

[www.efficientsee.com.au](http://www.efficientsee.com.au)

**Table of Contents:**

- 1 Overview
- 2 Bill Health-Check
- 3 Data Analysis
- 4 Opportunities Register

**Resource Coverage:**

Electricity	✓
Gas	
Fuel	
Water	
Waste	

**Site Map:**



**Acknowledgements:**

EfficientSee Pty Ltd wishes to acknowledge the kind contributions of the following;

Aaron Izzard	City of Mount Gambier	Energy data support.
Andrew Hutcheon	Zero Waste SA	Preliminary energy review
Andrew Fant	BSC	WEG Motor Supplier
Chris Sweet	Sweet Electrical	Electrical & Data Logging Installation
Garth Yeoman	System Select	Solar Review
Peter Collins	ILM Management	Energy review support
Brad DeVries	Airefrig	Refrigeration Equipment Supplier

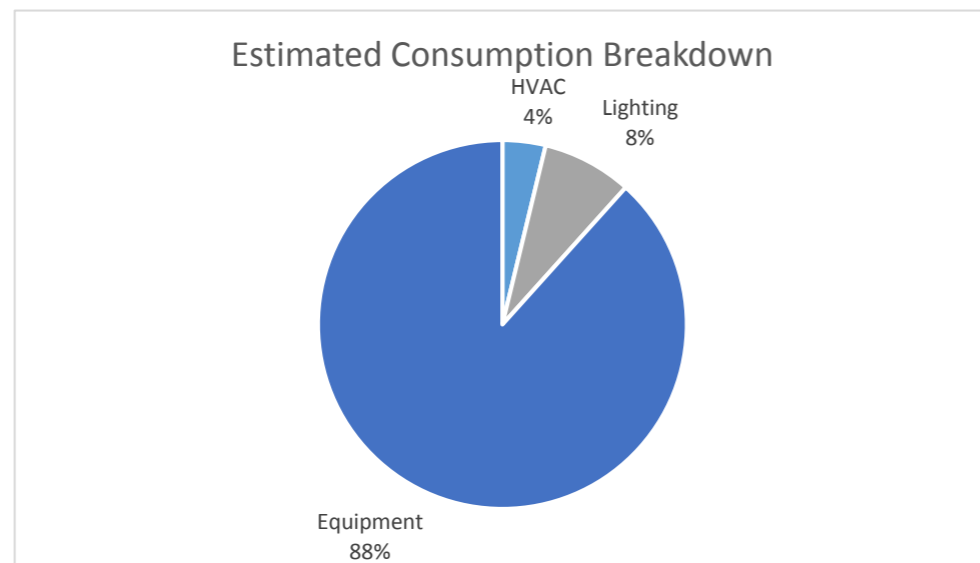
[www.efficientsee.com.au](http://www.efficientsee.com.au)

## Introduction:

An Energy Review was conducted in 2015 which revealed some good savings opportunities.

## Executive Summary:

	Forecast	Actual
Total Number of Opportunities:	21	
Total Project Value:	\$ 79,570	
Total Cost Savings:	\$ 18,980	
Total Reduction:	81%	
Total Energy Savings:	84,606 kWh	kWh
Total Emissions Savings:	55.0 T	T
Overall Payback:	4.2 y	y
<b>Electricity</b>		
Total Consumption 2013:		185,042 kWh
Total Consumption 2014:		193,775 kWh
Total Consumption 2015:	104,803 kWh	



Gas	Forecast	Actual
Total Consumption 2014:	-	MJ

Water	Forecast	Actual
Total Consumption 2012:	-	kL
Total Consumption 2013:	-	kL
Total Consumption 2014:	-	kL

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## Key Opportunities:

	Payback	Saving	Item	Rating
1 Water Turnover Optimisation	1.0	\$36.4k	7	A
2 Mercury Vapour Upgrade	2.5	\$0.9k	5	A
3 Pump Motor Efficiency	2.8	\$5.1k	13	A
4 Display Fridges Controls	-	-	1	A
5 Display Fridges Lighting	-	-	2	A
6 Freezer Ventilation	-	-	9	A
7 Encompass Data Portal	-	-	12	A
8 Room Ventilation	-	-	10	A
9 Solar PV	5.4	\$36.0k	14	B
10 Thermostat Setpoints	-	-	8	B
11 Refrigeration Setpoints	-	-	3	B
12 Freezer Covers	-	-	11	B
13 Movement Sensors	-	-	17	B
14 Security Lighting Timer Adjustment	-	-	20	B
15 T8 Fluoro Upgrade	11.2	\$4.4k	4	C

## Items for Further Investigation:

Electricity	Area	Item Ref
Chlorination Cabinet ventilation	Administration	21
Pumping Cabinet overheating	Administration	22

## Common Factors:

Electricity Price Peak:	0.29 \$/kWh	Working Weeks/Year	26
Electricity Price Off-Peak:	0.12 \$/kWh	Avg. Peak Sunshine Hours	4.2
Electricity Emissions Factor:	0.65 T/MWh	Days Per Year	365
Electricity Price Average:	0.20 \$/kWh	Working Day Per Week	7
Gas Price Average:	\$/MJ	Working Days Per Year	182
Water Price Average:	\$/kL	Weekend Days	52

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# Electricity Bill Health-Check Meter 1

Customer: City of Mount Gambier | Site: Aquatic Centre | Retailer: Origin | Project ID: 15002  
 NMI: SAAAAAE693 | Meter Type: CT | Contract End: TBC | Tariff: Low Voltage Business - 2 Rate | Issue: B2

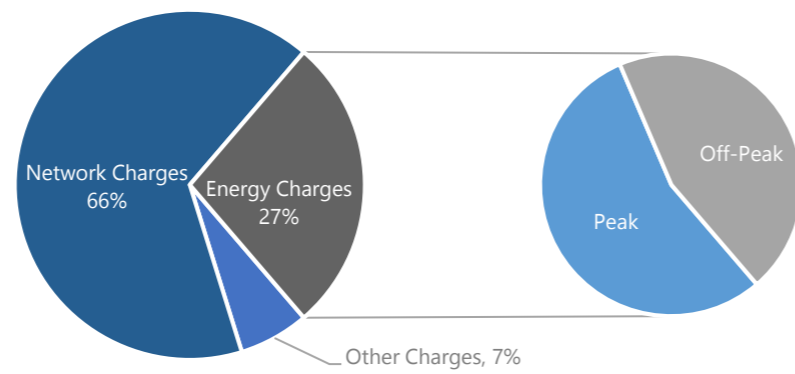
## Cost Review

Calculated Annual Cost	\$ 48,000 /y
Annual Consumption	193,775 kWh
Annual Emissions	126 T

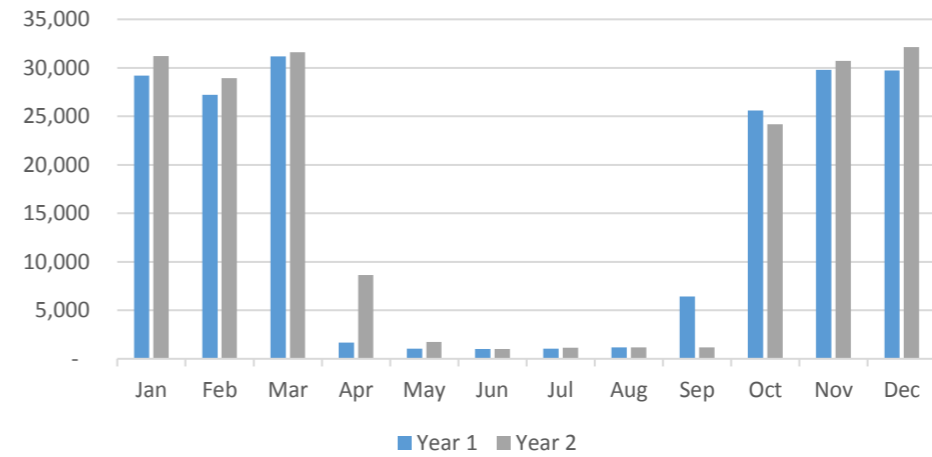
Peak Rate	0.06444 \$/kWh
Off-Peak Rate	0.03766 \$/kWh

Total Peak:	78,355 kWh
Total Off-Peak:	115,421 kWh

Bill Cost Breakdown



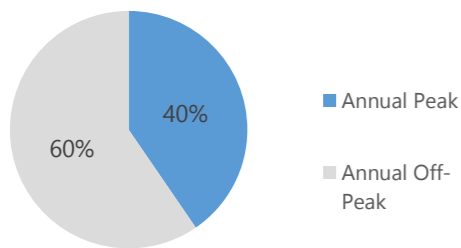
## Monthly Consumption



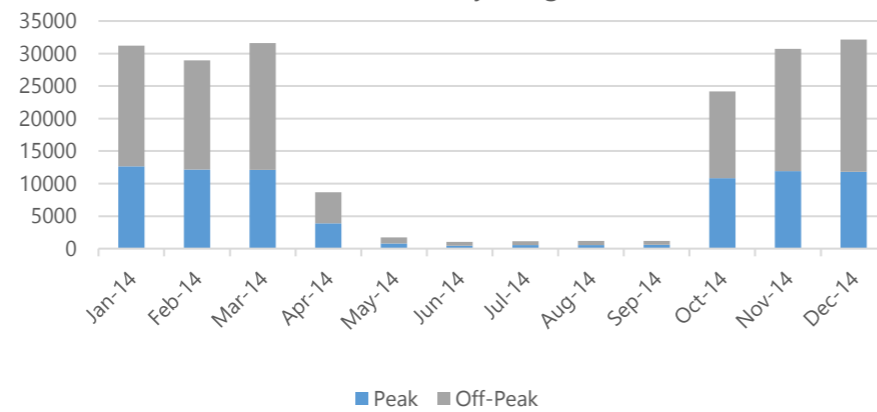
Month	kWh
Jan-13	29,190
Feb-13	27,211
Mar-13	31,171
Apr-13	1,683
May-13	1,035
Jun-13	1,002
Jul-13	1,047
Aug-13	1,177
Sep-13	6,415
Oct-13	25,586
Nov-13	29,800
Dec-13	29,725
Jan-14	31,227
Feb-14	28,933
Mar-14	31,602
Apr-14	8,649
May-14	1,750
Jun-14	1,019
Jul-14	1,160
Aug-14	1,177
Sep-14	1,188
Oct-14	24,198
Nov-14	30,730
Dec-14	32,142

## Consumption Review

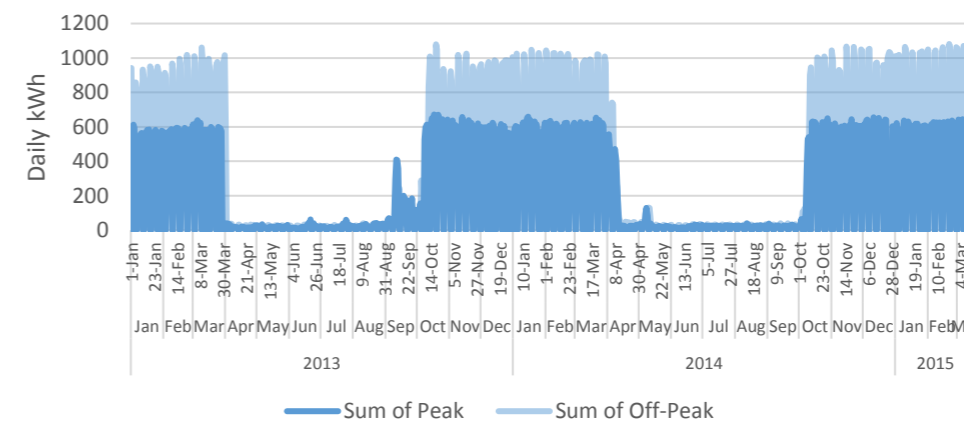
Peak/Off-Peak Cost Ratio



Total Monthly Usage



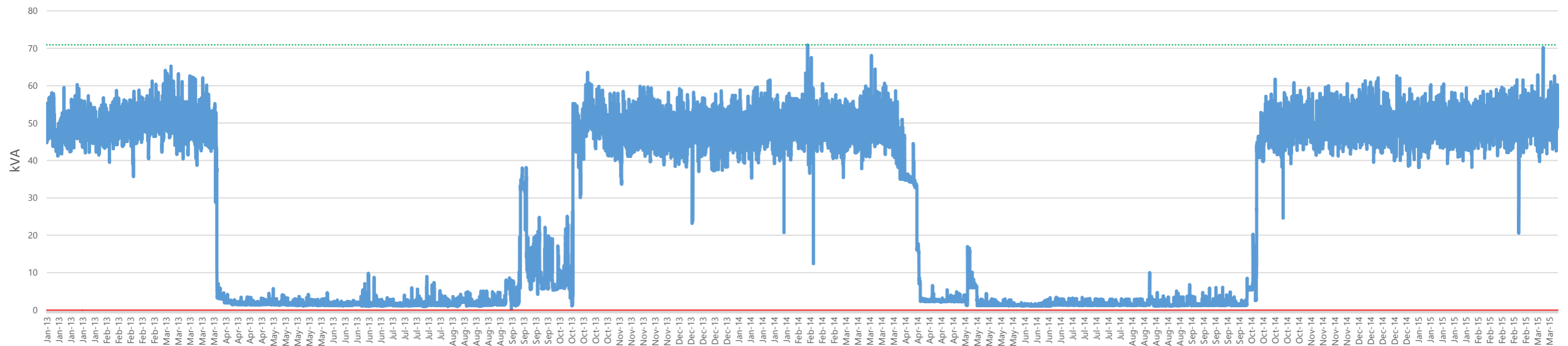
## Daily Consumption



## Capacity Review

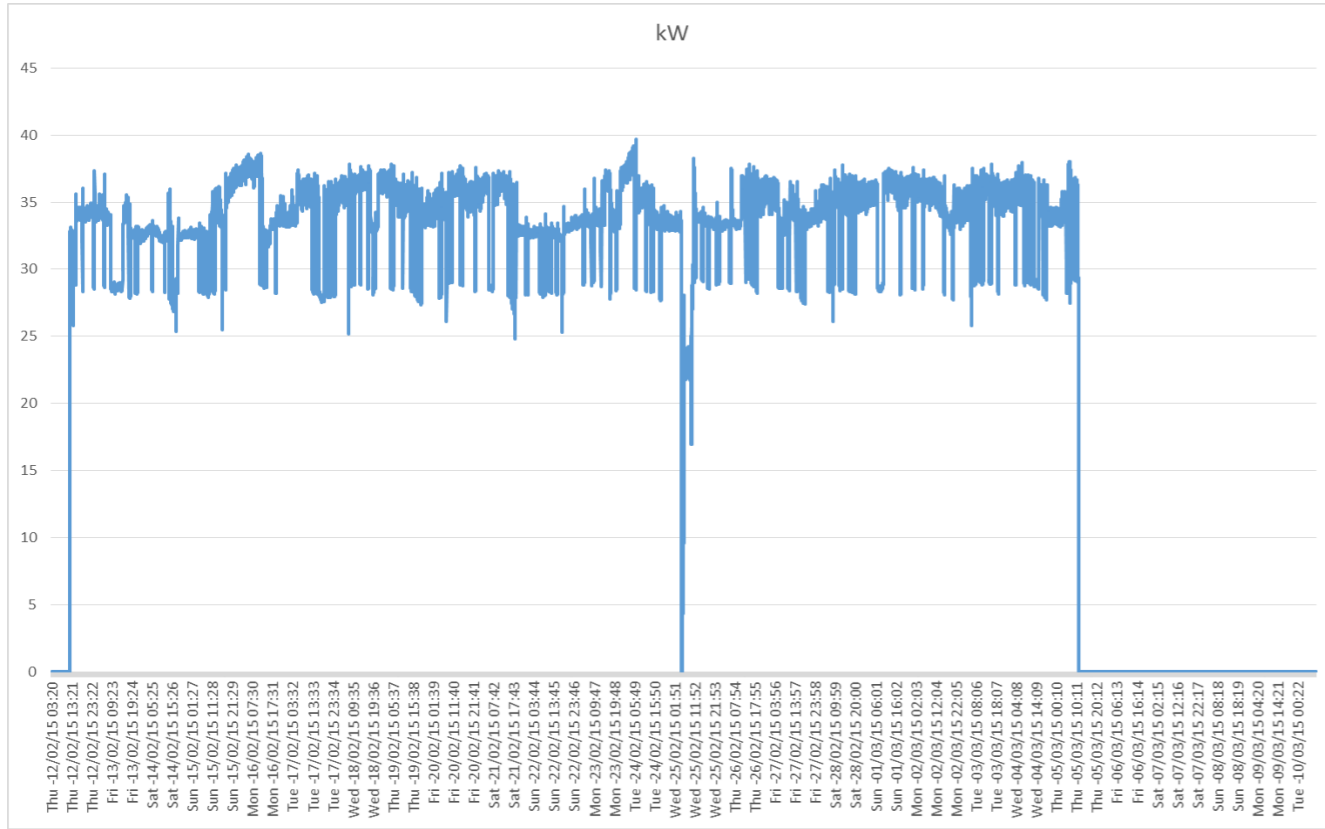
Excess kVAr:	Not Charged	\$0 /y
Highest Metered Demand:	61.23kVA, PF=0.87	9/03/2013 12:30

— Agreed Max Demand: 0 kVA  
 ..... Potential Max Demand: 71 kVA

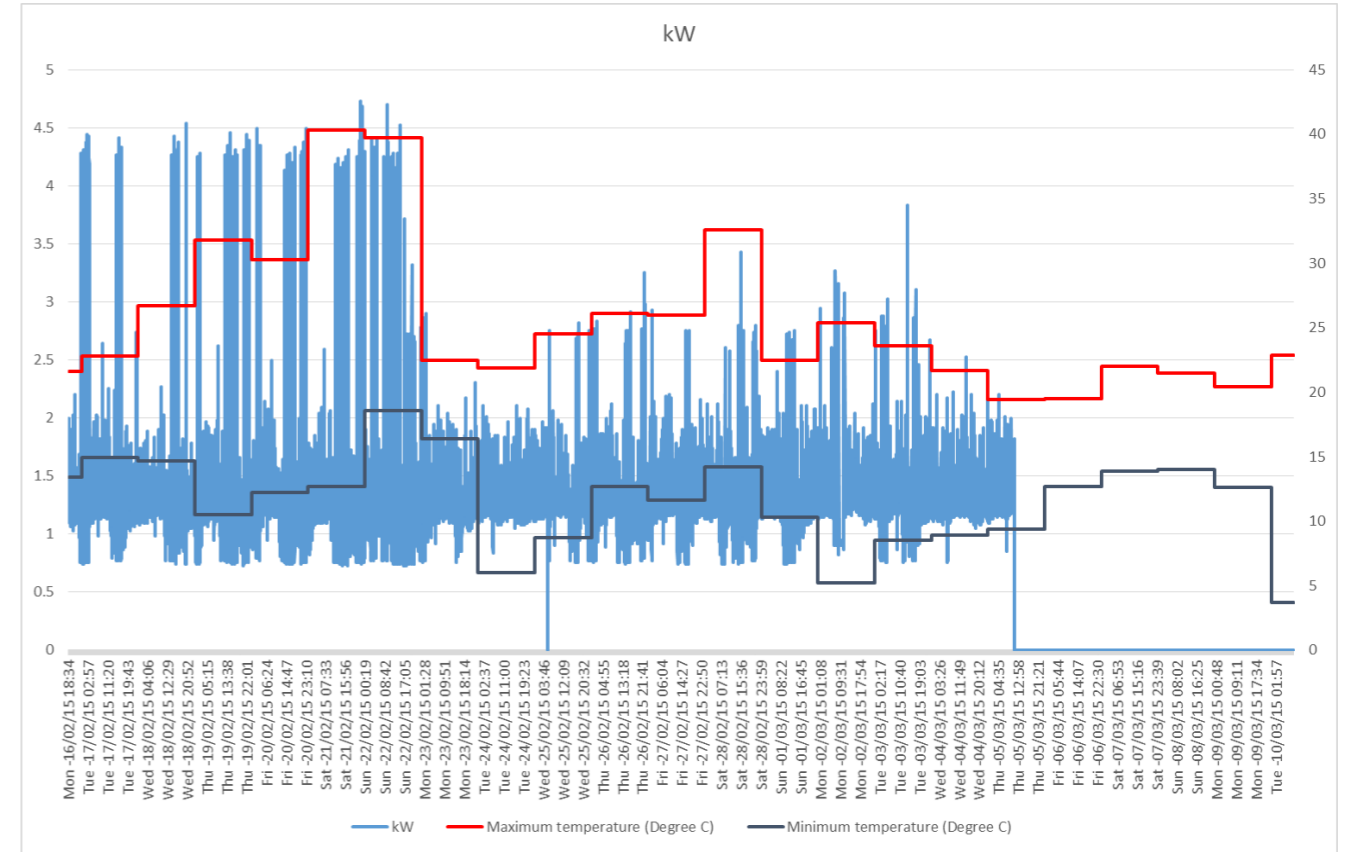




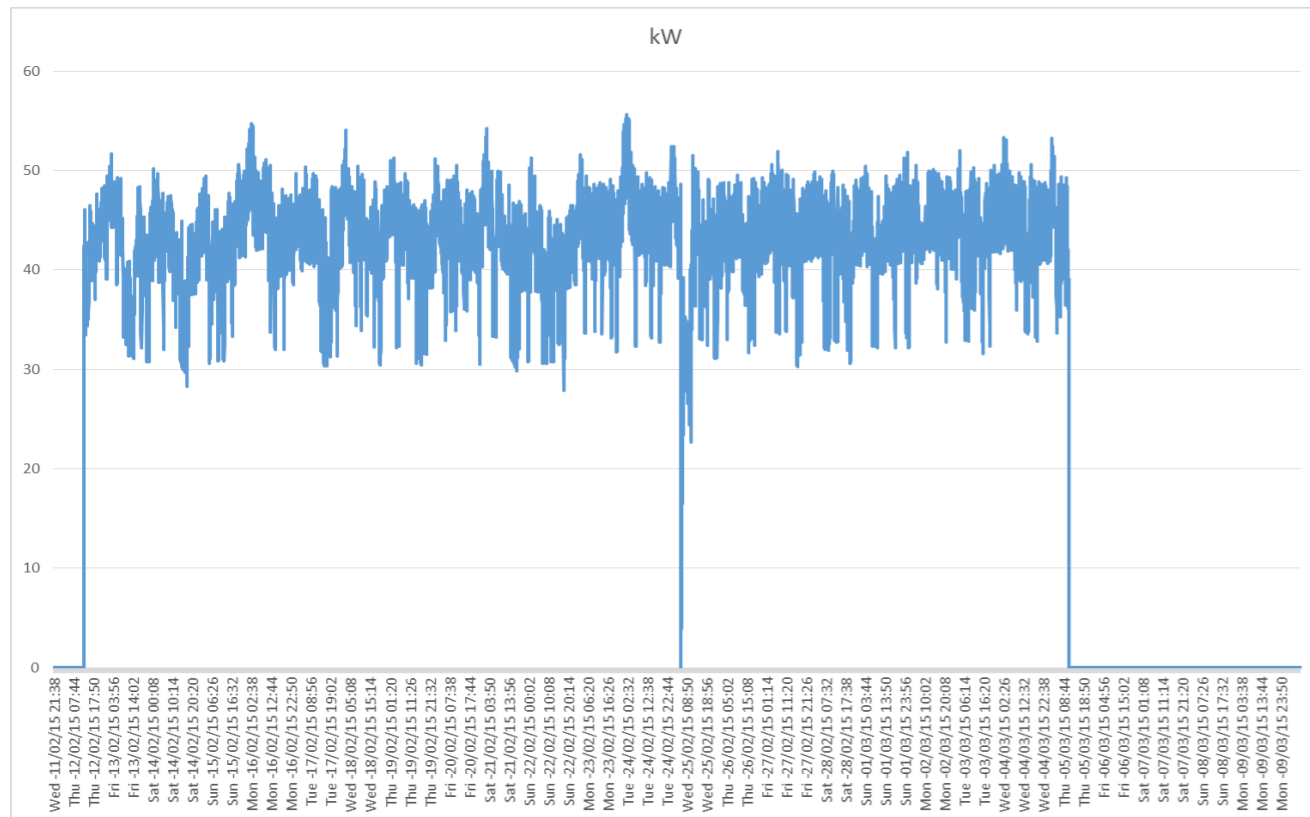
### Logger 1: Pumping Sub-Board



### Logger 3: Boiler Control Board



### Logger 2: Plant Room Distribution Board



### Comments/Observations:

**Logger 1:**  
The data matched theoretical expectations for the Pumping system and confirmed the 24/7 operations of the pumps. It shows a high base load of around 25kW which would be the 2x11 kW circulations pumps. The variable loads would be the hot water transfer pumps and dosing pumps.

**Logger 2:**  
The data confirms that the Pumping control panel is fed from the Grey Distribution Board in the boiler room. Although labelling of the board was incomplete it is believed that the Boiler Control panel and the Chlorinator Panel are fed from this board also.

**Logger 3:**  
The data show the electrical load associated with running the wood-chip boiler. The high spikes are expected to be generally caused by the additional of conveyor load when fuel demand is high i.e. during the day. It is not a high load in comparison with pumping.

Item	Opportunity / Recommendation	Action	Comments	84,606 Energy Savings	18,980 Cost Savings	Additional Benefits	55.0 Emissions	Water Savings	Calculation Assumptions	79,570 Project Cost	Timing	4.2 Payback
1	<b>Display Fridges Controls:</b> Consider additional display fridge controller so that drinks temperatures can be optimised and units switched off for periods overnight.		Retro-fit smart energy savings controller such as the DFX 2eRT that has been specifically designed for use on stand-alone medium temperature refrigerated cabinets with 10 amp single phase power leads									-
2	<b>Display Fridges Lighting:</b> Display fridges often have at least 2 T8 fluoro lamps; one for illumination the sign and the other for the product. LED Fluoro replacement tubes can be retro fitted to save power through decreased wattage as well as reduced heat energy.											-
3	<b>Refrigeration Setpoints:</b> One display freezer was observed at -28°C and another was set to its maximum setting of 7. The ideal storage temperature for ice-cream is -25°C. A review of these temperature is advisable as every degree impacts energy use.											-
4	<b>T8 Fluoro Upgrade:</b> Retrofit 41 x T8 fluoro's with LED Tubes		Labour: = \$0.3k (4x\$75), Materials: = \$14.2k (109x\$130)	4,418	\$ 1,293		2.9			14470		11.2
5	<b>Mercury Vapour Upgrade:</b> Retrofit 5 x MV fixtures with LED.		Labour: = \$0.5k (6x\$75), Materials: = \$0.3k (5x\$50)	942	\$ 276		0.6			700		2.5
6	<b>Flood Light Upgrade:</b> Retrofit 14 x MH fixtures with LED.		Labour: = \$0.3k (4x\$75), Materials: = \$7k (14x\$500), Other (EWP): = \$0.5k (1x\$500)	1,711	\$ 501		1.1			7800		15.6
7	<b>Water Turnover Optimisation:</b> It is believed that the turn-over of water in the pools is too high. Suggest installing permanent or temporary flow meters to ensure pumping requirements are minimised. It is understood that the regulations require turnover every 6 hours but presently the system completes turnover every 4 hours.	Consult regulations for exact water turnover rates and install flow meter to verify. Seek quotes for pumping controls upgrade.	**Calculations based on simple control system plus soft starter. Labour: = \$1.8k (24x\$75), Materials: = \$5k (2x\$2500), Engineering: = \$0.8k (8x\$100)	36,400	\$ 7,150		23.7			6800		1.0
8	<b>Thermostat Setpoints:</b> Some setpoints were observed as low as 11 Degrees C, which is far too low. Ideally Summer setpoints should be as close to 23 Degrees in Summer and 18 Degrees in Winter.											-
9	<b>Freezer Ventilation:</b> A Streets Ice Cream freezers were used for storage of frozen goods but not for point of sale display. These freezers are not ideally suited for this application as the glass doors allow temperature exchange. Consider using a more appropriate chest freezer for this application. Additionally the room in which these freezers are located gets quite warm due to lack of ventilation. It is highly advisable to increase ventilation in this area to improve refrigeration performance.											-
10	<b>Room Ventilation:</b> The room in which the Ice-cream freezers are located gets quite warm due to lack of ventilation. It is highly advisable to increase ventilation in this area to improve refrigeration performance. Additionally the plant room does suffer from high temperatures and equipment such as the Chlorination unit seem particularly susceptible. There is one exhaust fan in this room but it appears inadequate.											-
11	<b>Freezer Covers:</b> The glass doors of the Streets Ice Cream freezers were used for storage of frozen goods but not for point of sale display. These freezers are not ideally suited for this application as the glass doors allow temperature exchange. Consider using a more appropriate chest freezer for this application. Additionally the room in which these freezers are located gets quite warm due to lack of ventilation. It is highly advisable to increase ventilation in this area to improve refrigeration performance. Alternatively insulated covers over the glass of these units with help prevent heat ingress.											-
12	<b>Encompass Data Portal:</b> The current retailer Origin offers free access to a data portal whereby the pool management could get access to daily electricity data. This would help give further insight in to their impact on consumption.											-
13	<b>Pump Motor Efficiency:</b> The 2 x 11kW motors used for 24/7 pumping are quite old (1980) and although rewind recently only offer around 88% efficiency. There is a case for upgrading to more efficient motors.		**Calculations based on assumption that efficiency improves from 88% to 92%. Labour: = \$0.6k (8x\$75), Materials: = \$2.2k (2x\$1100),	5,087	\$ 999		3.3			\$ 2,800		2.8
14	<b>Solar PV:</b> There is an opportunity for up to 30kW of Solar PV to be considered although with no feed-in tariff the payback will be longer due to the 6-month site operation.		**Calculations assume 0% export whilst Centre open. Labour & Equipment: \$41k, Metering Charges: \$2k, Engineering Reports: \$2k, 5% Contingency: \$2k	36,049	\$ 8,761		23.4			\$ 47,000		5.4
15	<b>Pool Cover Utilisation:</b> A review has been done in the past but may need to be revisited with increases in electricity prices. This is the major source of heat-energy losses and whatever energy is lost needs to be replaced to maintain temperature setpoints.											-
16	<b>Off-Peak Utilisation:</b> It appears that the temperature setpoints have been commissioned appropriately, but it would be wise to verify if the Boiler installers considered ways maximising the use of off-peak energy i.e. by using pre-7am to add more heat.											-
17	<b>Movement Sensors:</b> Change rooms, Toilets and the Plant Rooms would benefit from having movement activated light switching to avoid fixtures being left on for extended periods.											-
20	<b>Security Lighting Timer Adjustment:</b> The Carpark and Area lighting for security purposes are controlled by timers. It is prudent to adjust these units for daylight savings changes. Both timers seemed to be several hours out of sync with actual time.											-

Item	Opportunity / Recommendation	Action	Comments	Energy Savings	Cost Savings	Additional Benefits	Emissions	Water Savings	Calculation Assumptions	Project Cost	Timing	Payback	
21	<b>Chlorination Cabinet ventilation:</b> It was noted that this cabinet does suffer from high temperatures. It is advisable to increase or improve the ventilation in this cabinet.		<p><b>Opportunities List Legend:</b></p> <ul style="list-style-type: none"> <li><span style="color: yellow;">■</span> Costed Opportunities</li> <li><span style="color: red;">■</span> <b>Red Text:</b> Noteworthy items requiring further investigation</li> <li><span style="color: blue;">■</span> Completed &amp; Verified Opportunities</li> </ul>									-	
22	<b>Pumping Cabinet overheating:</b> Discolouration of cables in this cabinet suggest possible overheating. This should be investigated further by an Electrician to confirm and advise of remedy.												-
23	<b>Natural Lighting:</b> Darker Areas such as the Plant Room and Boiler Room would benefit from skylights.												-

# SEE-Tick™ Sustainability and Energy Efficiency Program

Our unique 'SEE-Tick™' Program is structured on the platform of ISO50001 (international standard for Energy Management). This program helps us to map out the efficiency journey for our clients. Furthermore it provides a system for active energy management that can be maintained by the client moving forward. Clients participating in the program are awarded licenced use of the SEE-Tick™ accreditation logo as recognition of efforts in sustainability.



## STEP 1:

What energy is being used and how?

- Electricity Contract Brokering
- Maximum Demand/Tariff Review
- Efficiency Culture Assessment
- Level 1 (Desktop) Audit

### CASE STUDY

Our team provided a desktop assessment for a customer which revealed a series of savings opportunities valuing in excess of \$200,000 in the first year.

## STEP 2:

Where is energy being used and how can it be controlled?

- Level 2 (Detailed) Audit
- Energy Modelling
- Load Profiling
- Targeted Health-Checks

- Compressed Air
- Extraction Systems
- HVAC Systems

### CASE STUDY

Our team provided valuable insight for a customer using load profiling techniques that helped to identify some 25% of energy that was unaccounted for.

## STEP 4:

What has been achieved so far and how do we keep improving?

- Energy Coaching
- Measurement & Verification
- Visualisation
- On-going Reporting

### CASE STUDY

Our team successfully created an internal Action Team for our client which became responsible for not only taking action of existing initiatives but providing a forum for collating and reviewing new ideas from within the organisation.

## STEP 3:

What can we do now about our energy use?

- Energy Strategy
- Project Planning
- Funding Applications
- Turn-key Projects

### CASE STUDY

Our team prepared detailed project plan for our customer enabling them to apply for both internal external funding and to enable over \$250,000 worth of efficiency projects.



## Environmental Sustainability Program 2015 – Project Progress

**Updated: 2<sup>nd</sup> June 2015**

Project	Summary	Progress Notes
Salvage Yard	Investigate opportunities for re-establishing a salvage yard in Eucalypt Drive.	In mid-April the Director Operational Services and Environmental Sustainability Officer visited the Eaglehawk salvage yard in Bendigo, which has been successfully operating for over 20 years. The ESO also visited three regional salvage yards in the vicinity of Adelaide in mid-May.
Caroline Landfill Audit	Audit the trucks depositing waste to the landfill to identify opportunities to reduce the amount of recyclables and organics that are being deposited.	The contractor undertook the audit from 13-17 April and has now collated the results. These have been analysed by the ESO and findings detailed on the June ESSC agenda.
Organics Next Steps	Investigate opportunities for reducing the amount of organic waste being put in Council's kerbside rubbish bins.	At the March 2015 Council meeting Council approved the release of 2,000 kitchen caddies with bio-bags to organics bin subscribers in the 2015-2016 financial year. Bulk buy opportunities for compost bins and worm farms are also being investigated.
Library Solar Power System	Installation of a 57kW solar system on the roof of the Library, to supply 25-30% of the Library's electricity needs.	The system is inspected to be fully functional by Friday, 29 <sup>th</sup> May 2015. The delay has been due to SA Power Networks requirements, particularly anti-islanding equipment.
Blue Lake Solar Lighting	Involves the installation of solar lights around the footpath around the Blue Lake.	Installation of the lights has commenced. Due to be completed by the 29 <sup>th</sup> May 2015.
Park & Stride Mount Gambier	The aim of this 12 month project is to encourage community members who come to central Mount Gambier to shop, to park in an off-street car park and walk to shop, rather than drive from shop to shop.	The program has been launched. So far there have been over 440 Facebook page likes, 150 Surveys completed, over 150 people make the public commitment, and thousands of Facebook 'Post Reach'. A variety of prizes have been given including shop vouchers and P&S eftpos cards.
Bin Tagging	This involves checking the contents of waste and recycling bins from 150 properties, and give specific feedback about what goes in which bins.	All four runs completed. Recycling bin contamination reduced 41%, and waste bins by 47%. Final results are detailed on the June ESSC agenda.
Efficient Homes Project	This project involves installing temperature loggers in houses constructed of a variety of materials – rammed earth, modern eclectic, modern brick veneer and limestone – and leaving them in situ for 12 months.	Loggers have been placed in a new set of houses for 2014-2015. They will be collected in June 2015.
Aquatic Centre Energy Audit	An audit of the electricity use of the Mount Gambier Aquatic Centre. It is anticipated that the auditors will make recommendations for improving the efficiency of the facility, leading to long term reductions in electricity costs.	Results of the audit have been remotely presented. Audit results are detailed on the June ESSC agenda.
2015 KESAB Awards	Nominate City of Mount Gambier for numerous categories within the KESAB awards.	Currently collating information for the 2015 nomination. Please forward any ideas to the Environmental Sustainability Officer – Carmel Ron.
Resource Efficiency Review	Review of Council operations to identify what level of resources are currently being used, and identify opportunities for increased efficiency.	Some initial data received from Finance and suppliers. Analysis of data will commence in the near future as the ESO work program allows.
Fruit Tree EOI	Involved working with residents to put a small number of fruit trees in their local reserve.	Submissions closed on 23 <sup>rd</sup> April 2015. One submission from Limestone Court for five trees was received and has been reviewed by the



		Environmental Sustainability Officers, Community Development Officer and Community Health Officer. All are happy with the submission. Date of planting to be organised with local residents.
Carbon Reporting	Measure and report on Council's carbon emissions for the 2014-2015 financial year. Assess if Council triggers any carbon and/or climate change legislation.	Reporting will commence when final 2014-2015 utility bills are received in August.
Smaller Projects	<ul style="list-style-type: none"> <li>- Smart Living profiles.</li> <li>- Talks at schools and community groups on environment and sustainability topics.</li> </ul>	<ul style="list-style-type: none"> <li>- Five Smart Living profiles have been completed.</li> <li>- Talks undertaken on an ongoing basis upon request.</li> </ul>
Environmental Events	<ul style="list-style-type: none"> <li>- Clean Up Australia Day</li> <li>- Earth Hour</li> <li>- Ride to Work Day</li> <li>- Walk to Work Day</li> </ul>	<ul style="list-style-type: none"> <li>- Completed.</li> <li>- Completed.</li> <li>- Wednesday 14th October.</li> <li>- Friday 8 November.</li> </ul>